DRAFT Appendix A: Supplemental Information and Guidance for Outdoor and Indoor Air Quality Programs Funded with FY 2009 STAG Funds

Organization

This grant appendix is divided into six major sections: an executive summary that highlights significant changes and developments, an overview of key administrative and programmatic requirements, discussions of specific air program areas, a preliminary national allocation of grants for state and local air pollution control agencies, and an overview and preliminary allocation of indoor radon grants.

Table of Contents

Introduction

Highlights
- OAR STAG request is $256.2M.
- Includes $49.2M for DERA.
- §105 authority for $25.5M for $PM_{2.5}$ monitoring.
- Funds for air quality / energy facility coordination.
- No longer dedicated funding for RPOs, and Great Lakes air toxics.
- Comment sought on measuring grant performance.

The preceding technical portion of the program guidance identifies the air and radiation priorities, programs, activities and milestones necessary to achieve the performance goals in the Agency's FY 2009 Annual Performance Plan and Congressional Justification and to make progress towards the Clean Air goal in the Agency's multi-year Strategic Plan. State, local and Tribal agencies (and key multi-state organizations), as co-implementors, are essential to that effort. Their roles and responsibilities, supported by EPA grant assistance, are also described in the State/ Local Air Quality Management, the Tribal Air Quality Management, and the Radon components of the technical program guidance. Related measures of performance are contained in the appendices covering the annual program commitments and the related subset of grant performance measures.

This appendix complements the technical guidance and provides additional information and guidance for selected program areas supported by grants to co-implementor agencies and organizations. The appendix highlights the major programmatic and administrative considerations impacting program grants in FY 2009 and includes a preliminary distribution[1] of state/local air grants. There are several significant developments for grants in FY 2009 including changes in funding level, purpose and authority; continued improvements in air monitoring programs; implementation of diesel emission reduction programs, coordination of energy facility development with air quality requirements, funding of multi-jurisdictional organizations; refinements in performance measures and accountability; and continued implementation of other key programmatic and administrative provisions.

The focus of this appendix is primarily on state and local program grants. While the guidance does discuss important provisions applicable to *all* air and radiation grants it does not cover specific OAR *project or discretionary* grants that may be available during FY 2009. More detailed guidance for these types of grants is provided in their respective solicitations or applicable information documents.[2] Please also note that additional, separate guidance pertaining to Tribal and Indoor Radon grants [3] may be available and that additional information and details on implementation of grant programs under the Diesel Emission Reduction Act will be forthcoming.[4] Agencies should contact the EPA program contact listed for more information.

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1 The allocation is preliminary at this point since: (a) additional consultation with stakeholders is necessary; (b) revisions may be necessary based upon a final FY 2009 appropriation and enacted budget, and (c) the amount of funds devoted to associated program support is subject to revision based on updated information from affected state/local agencies.
2 More information on OAR and other Agency discretionary grant opportunities, as it becomes available, can be found at: http://epa.gov/air/grants_funding.html and http://www.epa.gov/ogd/grants/funding_opportunities.htm .
3 Additional administrative guidance for the State Indoor Radon program may be found at: http://www.epa.gov/radon/sirgprogram.html . Additional information for Tribal air programs can be found at: http://www.epa.gov/oar/tribal/pdfs/menuofoptions.pdf . The program contact, Darrel Harmon, may be reached at: 202-564-7416.
4 Relevant information will be provided at: www.epa.gov/cleandiesel as it becomes available.

Please note that OAR is seeking comment on all aspects of its draft national guidance including the grant portion.

FY 2009 Funding

The FY 2009 budget request includes $256.2 million for outdoor and indoor air programs in the State and Tribal Assistance Grant (STAG) appropriation (Table A-1). A total of $185.6 million is targeted for the support of continuing state and local air programs, $13.3 million for tribal air grants, $8.1 million for state and tribal indoor radon programs and $49.2 million for continued support of diesel emission reduction programs including clean school buses (see Section III).

Table A-1 Comparison of STAG Assistance: FY 2007 through the FY 2009 Request (in $Ms)

Program	FY 2007 Operating Plan	Proposed for FY 2008 Enacted Level	FY 2009 President's Budget
Continuing Air Program *	$157.9	$164.5	$175.7
PM 2.5 Air Monitoring (§103)	$41.9	$41.8	
Air Toxics Monitoring (§103)	$9.8	$9.5	$9.9
Regional Haze Planning (§103)	$2.5	$1.0	
Clean School Bus USA **	$6.8		
Diesel Emission Reduction Program		$59.1	$49.2
Tribal Air Program	$10.9	$10.8	$13.3
State Indoor Radon	$8.1	$7.9	$8.1
Total	$218.8	$294.6	$256.2

* Includes continuing §105 program and NE OTC under §106. In FY 2009 this amount also includes grants for PM2.5 monitoring.
** Included in Diesel Emission Reduction programs in FY 2008 and FY 2009.

Changes in Grant Purposes and Authorities

For FY 2009, the President's budget includes approximately $175.7 million for continuing air programs and related associated program support. Included in this amount is $25.5 million proposed to support $PM_{2.5}$ ambient monitoring, as well as $3.9 million to support state and local work for effective coordination of air quality requirements related to expected increases in energy project development. With the completion of relevant air toxics analyses, EPA proposes that funds no longer being targeted for the Great Lakes air toxics program. Funds have also been proposed to be reduced for U.S.-Mexico Border work reflecting the transfer and ownership a portion of the cross-border monitoring network to Mexico. EPA is also expecting that state and local agencies will reduce investments in the areas of CO, SO_2, NO_2 and lead where significant air quality gains have been achieved. No funds have been identified for regional haze planning organizations (RPOs) in FY 2009 since the initial regional haze plans were due from states in December, 2007. EPA believes that the continued role of RPOs in regional haze planning should now be matter of state discretion rather than an EPA determination.

As noted, the President's budget includes $PM_{2.5}$ ambient monitoring under the continuing air program that is administered under §105 of the CAA. Section 105 requires a minimum 2/5

(40%) cost share from each recipient. EPA first proposed the transition from §103 (100% federal funding) to §105 in FY 2007. The transition in funding authority combined with a reduction in the level of STAG funds for $PM_{2.5}$ air monitoring to $25.5 million from a proposed $41.8 million level in FY 2008 means that state and local agencies will be required to assume an increased share of the costs of their $PM_{2.5}$ air monitoring program. EPA will work with states, local and tribal recipients to facilitate this transition in FY 2009. Based upon an assessment of $PM_{2.5}$ funding status, EPA plans to arrange for FY 2008 STAG grants awarded under §103 authority to conclude on or about March 31, 2009, after which FY 2009 STAG funds for $PM_{2.5}$ air monitoring will be added to the scope of the then-active §105 grants, or to performance partnership grants if they include the section 105 program.

For FY 2009, approximately $9.9 million under Section 103 authority has been proposed to continue support for: (a) the operation and improvement of the national air toxics trends sites monitoring network (NATTS), and its related associated program support activities of quality assurance, data analysis, and methods development; and (b) state and local community-scale air toxics monitoring projects selected on a competitive basis.

Continued Restructuring of Ambient Monitoring

Significant revisions to the Agency's ambient air monitoring regulations have also been accompanied by recent revisions to the national ambient air quality standard for particulate matter and, for FY 2009, and change in the status of how $PM_{2.5}$ monitoring is funded. Revisions to the NAAQS for other pollutants are also being considered. EPA has developed a funding strategy and distribution to support a refined $PM_{2.5}$ monitoring network and facilitate the transition of authority from §103 to §105 authority beginning in CY 2009. The guidance discusses various investments and disinvestments that may be appropriate in 2009 within the $PM_{2.5}$ program and in other NAAQS and air toxics monitoring areas to implement the new regulations and to achieve other air monitoring objectives. EPA will be working closely with Regions and recipients on implementation of their monitoring programs in FY 2008 and FY 2009. The Agency is also seeking comments on its approach as outlined in this guidance.

Funding Co-Regulator Organizations

For numerous years OAR and the EPA Regions have provided direct, non-competitive assistance awards to State and local co-regulator organizations using STAG funds redirected from State/Local continuing grant appropriations allotted under 40 CFR Part 35, Subpart A. Before making these awards, EPA's policy has been to confer with, and obtain the consent of, the affected State and local recipient air pollution control agencies. A co-regulator organization is defined by EPA as a national or regional (i.e., multi-jurisdictional) organization that represents the interests of co-regulators or co-implementors (state, tribal or local governments) in the execution of national or regional environmental programs.[5]

5 The definition of co-regulator/co-implementor may be found in the Agency's Order (5700.5A1) - Revised Competition Policy. http://intranet.epa.gov/ogd/policy/order/5700_5.pdf . In various regions of the country state and local agencies have formed multi-jurisdictional organizations (MJO) to help coordinate their geographically-specific air quality interests. These agencies have directed their Regional Offices to target portion of their grant allotment to their MJO. For OAR, the only co-regulator grant awarded at the national level with STAG resources has been to the National Association of Clean Air Agencies (formerly STAPPA-ALAPCO).

The Deputy Administrator has directed that the Agency ensure that the head of the affected State agency or department (e.g., the State environmental commissioner or head of the State public health or agricultural agency) is involved in this process and that EPA request and obtain the prior consent of this official before taking funds off the top of a state grant allotment for award to a state/local co-regulator organization. To assure that state preferences are being followed, each direct-funded state and local air pollution agency must provide an assurance to its Regional Office that the state's environmental commissioner has been involved in the co-regulator funding process and has provided prior concurrence before any of the state's STAG funds can be taken off-the-top to fund a co-regulator organization via a direct grant. EPA has not prescribed an approach for doing this, but OAR is advising that this assurance be obtained as part of the annual grant negotiation process for both state and direct-funded local air pollution control agencies. The concurrence should be documented by EPA in the recipient's grant file.

Also, effective October 1, 2007, the Agency's Competition Policy states that co-regulator status is no longer available as an exception to compete for a grant for a multi-jurisdictional organization. However, other exceptions to competition under the Policy - including the 'public interest' exception - remain available to a co-regulator organization when applying for a new grant after October 1, 2007.

Refinements in Performance Measures and Accountability

OAR is conducting an effort in consultation with stakeholders to assess and improve what, and how, performance is measured across air and radiation programs. The effort encompasses an examination of short- and long-term measures of performance including those related to grant-funded efforts. The latter area includes: assurances that all grants identify and demonstrate environmental and/or programmatic results or describe how their results can contribute to an environmental result; the compilation and reporting of information on grant-related performance measures in the Agency's Annual Commitment System, and other initiatives to improve grant performance. [6]

OAR and the Regional Offices are also working with recipients and the rest of the Agency in a continuing process to assess, reduce, refine or affirm existing reporting requirements. OAR invites comment from state, local and tribal agencies on ways to reduce reporting burdens as well as ways to improve performance reporting and performance measures. This includes discussion of improved short-term environmental indicators and performance measures and their incorporation in annual and multi-year assistance agreements.

Section II. EFFECTIVE GRANTS MANAGEMENT and RESULTS

State Grant Performance Measures

During the FY 2007 budget process, OMB's Program Assessment Rating Tool (PART) review was critical of the Agency's ability to determine how its state grant programs were delivering results consistent with the Agency's strategic plan. OMB directed the Agency to

6. Additional guidance on programmatic and environmental results from grants may be found at: http://www.epa.gov/ocfo/npmguidance/fy05_07guidance.htm and http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_environ_results.pdf .

develop a template for the states to follow in preparing and submitting their work plans for single media categorical and Performance Partnership grant awards. The template should: (a) include clear linkages to EPA's Strategic Plan and long and short-term goals; (b) have requirements for consistent and regular performance reporting; (c) allow for meaningful comparisons between various States' past and planned activities and performance; and (d) include language and mechanisms assuring state accountability in meeting performance goals.

In responding to the template directive, in order to avoid increasing unnecessary recipient reporting, EPA and OAR identified a limited number of improved grant measures that focused on environmental and/or programmatic outcomes. For the most part, the template measures are a subset of the larger suite of OAR commitments and measures that appear in the Agency's Annual Commitment System (ACS). The measures either reflect information already being reported by recipients pursuant to their grant work plan agreements or measures that are derived from this information to form a new metric. Several of OAR's grant template measures reflect agreements between OMB and OAR resulting from the NAAQS PART review.

For FY 2009, OAR's outdoor air grant template measures will remain largely unchanged with the same metrics and only minor language changes for clarification. However, the Office of Radiation and Indoor Air (ORIA) plans to discuss possible refinements in its radon grant program measures with its states during CY 2008.

OAR's template measures typically require that recipients continue to commit to report underlying data or performance information. Many of the template measures for outdoor air were new metrics that first required OAR to collect 2007 baseline information. In many cases, particularly where measures are based on air quality data, the information to establish a FY 2007 baseline won't be available until mid CY 2008. While Regions may ask that states and locals provide them with commitments and/or targets for certain measures, state-specific commitments/targets are not expected to be aggregated at the national level for inclusion into ACS for FY 2009. In the final FY 2009 national guidance OAR will issue additional information to Regions outlining specific responsibilities for each template measure. Recipients will still be required to include a copy of the template with their FY 2009 grant agreement.

Please note that a separate appendix of the OAR national guidance provides a complete listing of the FY 2009 annual commitments and grant performance measures. For reference, OMB's more detailed PART findings may be found at: http://www.whitehouse.gov/omb/expectmore . Background information on the template measures and the methodologies behind them can be found at: http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_grant_template.pdf , http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_additional_guidance.pdf , and http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_q_and_a.pdf. [7]

Achieving Programmatic and Environmental Results

The OMB template recognizes the importance of assuring that the utilization of public funds is aligned with the results intended to be achieved. It is also consistent with prior actions

7 The ACS includes commitments and measures that EPA feels are essential for program management and performance assessment. Responsibilities are included for both EPA (HQ and Regions) and State/Local/Tribal grant recipients. All ACS information that is applicable to grant recipients is still required to be covered in grant work plans. The template doesn't diminish these; it simply highlights a subset of this information by focusing on those aspects that express short-term environmental results or accomplishment of key milestones.

taken by EPA to bolster the effective management of grants and ensure results, specifically EPA's Order 5700.7 – Environmental Results in Grants effective in January 2005.

EPA Order 5700.7 applies to *all Agency grants* not just grants to States – and it covers all phases of the grants process from solicitation to application to reporting to evaluation. The Order requires EPA project officers to assure that each grant: (a) can be linked to the Agency's strategic architecture, (b) articulates measurable outputs and outcomes, and (c) reports the programmatic and, where possible, environmental results achieved. OAR's national guidance outlines selected programmatic and environmental results expected from state, tribal, and local programs funded by Federal grants including any applicable PART measures. Regional offices should use the national guidance in the negotiation of project, categorical and performance partnership grant agreements with grantees. For competitive grants, the Agency's announcement or solicitation will also articulate the linkage to the Agency's architecture and the expected accomplishments.

The Order also reinforces the accountability requirements contained in current grant regulations. Approved agreements should meet the requirements of 40 CFR 30, 31 and 40 CFR 35, as appropriate. Pursuant to 40 CFR 35.107, both §105 grants, and Performance Partnership grant agreements that include §105 grants, should include a workplan that articulates work years and estimated funding amounts per work plan component. A workplan component can be defined by the recipient but should include workplan commitments and a timeframe for their accomplishment. This includes milestones, deliverables, and expected outcomes or accomplishments. These requirements are consistent with EPA's Order 5700.7.

Performance objectives and measures related to the grant-funded activities discussed specifically in this guidance are included within the respective sections of the narrative and Appendix B on commitments and performance measures (including PART measures related to grants). Additional information on environmental results and grants and other grant administrative requirements intended to assist EPA project officers and recipients in improving overall grant management is discussed below. The Results Order may be found at: http://www.epa.gov/ogd/grants/award/5700.7.pdf . For more information on the template or EPA Order 5700.7 please contact William Houck @202-564-1349.

Promoting Competition

EPA's policy is to promote competition in the award of grants and cooperative agreements, and to ensure that the competitive process is fair and open, with no applicant receiving an unfair advantage. EPA Order 5700.5, effective September 30, 2002, includes the requirements for implementing this policy. In drafting the order, EPA recognized that it is not practical to compete certain grants and cooperative agreements. The competition order exempts grants for continuing environmental programs, such as those funded under section 105. The order also exempts: grants for fine particulate monitoring that have been awarded under §103, national air toxics monitoring trends network grants that have been awarded under §103, regional haze planning organization grants, and federally-recognized tribes and inter-tribal consortia under OAR's tribal grant program; TSCA section 306 grants for state indoor radon programs; and TSCA section 10 grants for tribal radon programs. The order does not preclude EPA from allocating grant funds for a portion of these programs through competition, if the Agency

determines it is in the best interest of the public.[8] The order may be found at: http://www.epa.gov/ogd/grants/competition.htm. For more information on competition in air assistance programs, contact Katherine Moore in OAR at 202-564-1356.

Using Proper Authorities for Award

Following the restructuring of the Agency's appropriations structure several years ago, OAR issued guidance for use by Program and Regional Offices clarifying what entities were eligible for grant assistance given the purpose, appropriation and grant authority appropriate to the funds (see "Guidance for Funding Air and Radiation Activities Using the STAG Appropriation" (11/12/99; OAR). This guidance has been updated and a revised version was forwarded for Agency review on January 17, 2008. A final version of the document is expected by March 2008 and information will be included in the final FY 2009 OAR national guidance.

For the most part EPA funds state, tribal, and local continuing air programs using the authority of Section 105 of the Clean Air Act and funds the Ozone Transport Commission (OTC) using Section 106 of the Act. EPA also awards radon assistance grants under sections 10 and 306 of the Toxic Substances Control Act (TSCA). CAA Section 103 authority enables the Agency to provide grants to a range of entities for research, investigations, experiments, demonstrations, surveys and studies relating to the causes and effects (including health and welfare), extent, prevention and control of air pollution.

The content of EPA's budget justification, the language of the appropriation, the legislative history, and Agency policy, however, further detemine how §103 authority is used. Historically, §103 authority has also been used for air toxics monitoring, Tribal capacity building, regional haze planning and for certain activities carried out by multi-jurisdictional organizations that are comprised of state, local and tribal representatives. The enacted FY 2008 Omnibus spending bill retained §103 authority $PM_{2.5}$ monitoring activities. For FY 2009, however, the President has requested the use of §105 authority for $PM_{2.5}$ monitoring activities.

Regional Offices have been allocated FY 2008 funds in amounts which will allow continued recipient expenditures under §103 authority through about March 31, 2009, at which time these §103 grants should be closed out.[9] This is to ensure that the Agency does not run afoul of 31 U.S.C. §1301(a) (i.e., appropriations shall be applied only to the objects for which the appropriations were made except as otherwise provided by law). It also means that FY 2009 funds provided for $PM_{2.5}$ monitoring activities will need to be added to the existing §105 agreements. Regions and recipients will need to consider and account for the addition of these funds relative to §105's cost share requirements. Regions need to ensure that no specific state/local activity at any given time and place is supported by both a §103 and a §105 grant.

As EPA and its partners make this transition, OAR will need to be mindful of its grants management responsibilities and will need to work closely with the Regional Offices and with State, Local and Tribal agencies to:

8 40 CFR 35.143 (c) enables the Administrator to award §105 on a competitive basis.

9 Exceptions may be needed in limited circumstances, for example to complete a one-time equipment procurement which under recipient procedures cannot be completed by March 31, 2008.

- communicate the proposed changes in grant authority to recipients;
- ensure that funding on current grants is being drawn down appropriately;
- obligate prior year and current funding as appropriate;
- return unused Section 103 funds to headquarters; and
- transition to the Section 105 authority after Congress appropriates FY 2009 funding with this change and the PM2.5 grants funded with FY 2008 and earlier §103 authority expire.

In addition to providing updated guidance on proper authorities for award and transition from §103 authority to §105 authority for $PM_{2.5}$ monitoring activity, OAR has also developed consolidated guidance covering the overall administration of the Section 105 air grant program. This guidance was also circulated for internal EPA review on January 17, 2008 and should also be finalized by March 2008. Additional information will be included in OAR's final FY 2009 national program guidance. Please contact William Houck at 202-564-1349, for more information.

Ensuring Effective Oversight of Assistance Agreements

EPA issued Order 5700.6, effective January 8, 2003, to streamline post-award management of grants and cooperative agreements and to help ensure effective oversight of recipient performance and management. The order encompasses both the administrative and programmatic aspects of the Agency's financial assistance programs. It requires each EPA office providing assistance to develop and carry out a post-award monitoring plan, and conduct basic monitoring for every award.

From the programmatic standpoint, this monitoring should ensure satisfaction of five core areas: (1) compliance with all programmatic terms and conditions, (2) correlation of the recipient's work plan and application to actual progress under the award, (3) availability of funds to complete the project, (4) proper management of, and accounting for, equipment purchased under the award, and (5) compliance with all statutory and regulatory requirements of the program. Offices must conduct advanced monitoring on a certain portion of grant awards each year and carry out more extensive contact with, and review of, recipient performance. Both levels of oversight must be documented in the official grant file. EPA Regions may find more information on the order at: http://epawww.epa.gov/oinijhhk/order/5700.6.pdf .

Environmental Exchange Network

EPA, states, territories, and tribes are working together to develop the National Environmental Information Exchange Network. The Exchange Network is a secure, Internet-and standards-based way to support electronic data reporting, sharing, and integration of both regulatory and non-regulatory environmental data. Where data exchange using the Exchange Network is available, states, tribes and territories exchanging data with each other or with EPA should make the Exchange Network and EPA's connection to it, the Central Data Exchange (CDX), the standard way they exchange data and should phase out any legacy methods they have been using. More information on the Exchange Network is available at: www.exchangenetwork.net .

Section III. ADDITIONAL INFORMATION on SPECIFIC AIR PROGRAM AREAS

Diesel Emission Reduction Program

Program Purpose: The budget request for FY 2009 includes $49.2 million to support the Diesel Emission Reduction provisions of the Energy Policy Act (EPAct) of 2005. This includes funding for competitive federal grants to reduce diesel emissions from the existing fleet as well as funding to support the Agency's Clean School Bus USA program. Sections 791-797 of the EPAct authorize these grant funds which will support implementation of the National Clean Diesel Campaign.

In FY 2008, the Agency began implementation of Sections 791-797 of the Energy Policy Act of 2005 after authorization of $50 million for those provisions. Both the National Grant and Loan program and the State Grant and Loan program were funded. OTAQ expects to fund at least 200 new grants deploying technology in various sectors using diesel engines through these two programs.

Through this program, OAR will continue its focus on reducing particulate matter by up to 95 percent from existing diesel engines, including both on-highway and non-road equipment. Existing diesel engines are not subject to the new, more stringent emission standards that took effect in 2007 and later. These engines often remain in service for 20 or more years, and this program will help provide immediate reductions by retrofitting these engines with emission control technologies sooner than would otherwise occur through normal turnover of the fleet. Implementation of the program also will produce criteria air pollutant and air toxics benefits.

Program Design: In FY 2009, the Office of Transportation and Air Quality (OTAQ) expects to fund at least 225 new grants deploying technology in various sectors using diesel engines. This program will support grants and loans for diesel engine retrofits, rebuilds, replacements, cleaner fuels, idling reduction measures and low-cost revolving loans. Up to 30 percent of the funds for diesel emissions reduction grants *may* again be appropriated to provide formula grants to states to establish and support state clean diesel grant or loan programs. At this time it is unclear if funds will be appropriated for this provision or just for the National Diesel Emission Reduction (DER) program.

The Agency's strategy to implement this program and disseminate its associated clean diesel funding is dependent on the actual appropriation levels and any accompanying language regarding implementation. In addition, the timing of the actual appropriation will dictate when EPA will publish its national announcement of funding availability. As authorized by the Diesel Emissions Reduction portion of the Energy Act:

- At least 70% of the funding is dedicated to provide grants and low-cost revolving loans to support the National Clean Diesel Initiative charged with achieving significant reductions in diesel emissions. This will include the Clean School Bus USA program. Note that at least 50% of these funds are directed to benefit public fleets.

- If the state program provision is funded, as it was in 2008, no more than 30% of the total funding will be distributed directly to state programs which are designed to achieve significant reductions in diesel emissions. The Agency will provide guidance to states for applying for these

funds if this provision is funded. This would include information on the cost-effectiveness of various emission reduction technologies, and permissible uses of the grant funds as directed by the EPAct's Diesel Emissions Reduction provisions.

- In regard to the first 70% of the funding, the Agency will request proposals from eligible entities for projects that will reduce emissions from the existing fleet of diesel engines. EPA will give priority to projects that:

  - maximize public health benefits,
  - are in areas with poor air quality and/or with air toxic concerns,
  - pursue the most cost effective strategies,
    - including certified engine configurations, verified technologies, emerging technologies, early use of ULSD,
    - promoting alternative fuels where appropriate,
  - serve highest population centers,
  - serve communities with environmental justice concerns,
    - those that receive disproportionate air pollution from diesel fleets.

- EPA will publish Requests for Proposals (RFPs) and notify Congress, states, and other interested or eligible entities, of both this funding competition and of the direct state allocations through their respective associations (e.g., NACAA, AAPA, EMA, DTF), announcements on EPA's website, announcements on EPA's ten regional websites, press advisories, and other means.

- The RFA will provide a 90-day window for eligible entities to apply to EPA for this funding assistance. Once that 90-day window expires and within the subsequent 120-day period, EPA will:

  - Review every proposal received to ensure each one meets the required funding eligibility and other criteria set forth in the RFA.
  - Disregard proposals that do not meet the criteria.
  - Rank each remaining proposal on its merits according to the criteria set forth in the RFP (see "priorities" above.).
  - Notify Congress of the grantee selections.
  - Award the highest ranked proposals.

For more information, please contact Jennifer Keller in the Office of Transportation and Air Quality at 202-343-9541. Information will also be updated at the following website: www.epa.gov/cleandiesel .

Air Quality and Energy Development

EPA is proposing that $3.9 million of the STAG request be targeted to support state and local work for early and effective collaboration on energy development activities and projects to: (a) ensure seamless integration of state requirements with those of the federal National Environmental Policy Act (NEPA), and (b) minimize state/federal regulatory redundancy. The initiative includes: building expertise to effectively collaborate and negotiate throughout all stages of energy development; conducting the needed monitoring and modeling needed to assess energy development impacts prior to permitting; and the development of guidance. A

preliminary distribution of STAG resources for this initiative has not yet been proposed in deference to prior consultation with states, locals and tribes.

National Geographic Priorities

U.S.-Mexico Border Air Program

The proximity of states and localities in EPA's Regions 6 and 9 to the border presents a number of trans-boundary air quality challenges. Many border area residents, especially those in heavily urbanized areas, are exposed to health-threatening levels of air pollutants including ozone, PM, CO SO2, and air toxics. Visibility impairment exists in most of the Class I areas along and near the border. Accurate evaluation of air quality in the border will allow both countries to successfully target controls and reduce air pollutants. Capacity-building via such evaluation, training, and pilot projects that can be expanded by Mexico will further reduce air emissions along the border.

The *Border 2012: U.S. Mexico Environmental Program* agreement, signed by both countries on April 3, 2003, was created to promote regional as well as border-wide strategies to improve air quality through coordinated air quality planning and management activities, such as the development of emissions inventories;; the deployment, operation, and maintenance of air monitoring networks; the development of alternative fuels and energy sources; the development of innovative and progressive air quality management approaches;; the design of air quality plans for the reduction and control of air pollution; pilot emissions reductions projects; and training and workshops aimed at building capacity, and the development of public awareness and participation.

Milestones for demonstrating progress towards clean air in the border region are outlined by the *Border 2012 Program* and in EPA's long and short term strategies goals and objectives. Grant assistance plays a key role in helping achieve them. Early efforts focused on developing an organizational infrastructure, raising awareness, gathering information and establishing baseline information. Recent assistance has increasingly been focusing on critical analysis and mitigation measures such as retrofitting diesel engines aimed at attaining clean air goals and building capacity for Mexico to take over management of these and similar programs. In FY2008 the *Border 2012 Program* Objectives for the Air Program were refined to include building border greenhouse gas (GHG) information capacity and expanding existing voluntary cost-effective programs for reducing GHGs in the border region.

In addition to supporting the efforts of affected state, local and multi-jurisdictional agencies, the *Border 2012* Program uses regional workgroups, task forces, and policy forums to develop and implement air pollution emission reduction strategies. Many of these rely heavily on grass-roots input and actions. For example, OAR and its Mexican counterpart lead the Border 2012 Air Policy Forum, established to employ a bottom-up collaborative approach to develop strategies for cooperative emissions reduction efforts along the border. EPA's activities are designed to encourage, develop and implement cooperative projects with various levels of federal, state, and local government, tribes, academics, non-governmental organizations and others, so that sustained, comprehensive pollution abatement can occur in the common air sheds of border sister cities, as well as in remote areas where trans-border air pollution occurs. Air

Policy Forum members additionally advise EPA and Mexico's SEMARNAT on potential strategic funding needs and opportunities.

EPA Region 6 and 9 use a combination of direct grants and competitive solicitation to support State, Local, and Tribal initiatives. In encouraging local and grass-roots strategies, the Agency is committed to full and open competition for many grants and contracts. This empowers a larger number of state, local, tribal entities (also working with academics and NGOs) to become active participants in border air quality improvements. The combination of these STAG funds with directed, specific projects facilitated by contracts has yielded very positive results. In FY 2009, over $1.2 million split evenly between Regions 6 and 9 will be available to continue focusing on three major areas: public outreach and involvement, the enhancement of scientific knowledge, and the support of projects that deliver tangible emission reductions. The Regions will work with OAR to assure that the activities funded are appropriate to the entities eligible and the appropriate authority for award. For more information on the program please contact: Jim Yarbrough in Region 6 (214-665-7232); and in Region 9, Christine Vineyard (415-947-4125) or Andrew Steckel (415-947-4115).

Multi-State Programs

Regional Haze Planning Organizations

Regional Haze Planning Organizations (RPOs) have been instrumental in providing the States with the needed materials to complete the preparation of their required Regional Haze State Implementation Plans (SIPs). These plans were due to EPA from the States by December 17, 2007. EPA proposed allocated $1.0 million in funding for the RPOs in FY 2008 to assist in this task and to cover needed follow-up activities. The President's FY 2009 budget request no longer includes dedicated funding for RPOs reflecting EPA's view that the future role of and funding for the RPOs should be a matter of state discretion rather than an EPA determination. For additional information on regional haze planning and the RPOs please contact Jeff Whitlow at 919-541-5523.

Northeast Ozone Transport Commission (OTC)

The OTC was created pursuant to sections 176A and 184 of the CAA. The OTC represents Northeastern and Mid-Atlantic states in the Ozone Transport Region (OTR) in: (a) assessing interstate transport of ozone and its precursors; and (b) determining the need for, and appropriateness of, additional control measures within the OTR, or areas affecting the OTR. The OTC is supported by a small executive staff that functions largely to coordinate OTC activities, facilitate communication among members, and serve as the point of contact for organizations external to the OTC, including EPA. The OTC Executive Director also serves on the CAAAC, a senior-level Federal Advisory Committee established in 1990 to advise EPA on issues related to implementing the Clean Air Act Amendments of 1990. The OTC also serves as the regional haze planning organization for the OTR, in concert with the Northeast States for Coordinated Air Use Management and the Mid-Atlantic Regional Air Management Association.

For FY 2007-2009, the OTC's work continues to focus on six areas: general analytical support to member states; analysis of mobile, stationary, and area source measures, particularly new clean air technologies; member communications; solicitation of non-governmental

stakeholder input; coordination with other organizations; and consensus building. The focus areas are supported by OTC committees that develop and recommend specific action items for the Commission and the member states. The OTC implements its policy recommendations through consensus resolutions and draft model rules that provide guidance to member states. EPA is seeking comment on the appropriate level of funding for OTC activities. For more information contact Pat Childers at EPA at 202-564-1082.

National Association of Clean Air Agencies

The National Association of Clean Air Agencies or NACAA (formerly STAPPA-ALAPCO) is the national association of state, territorial, and local air pollution control agencies in the United States. NACAA is supported with a small staff located in Washington, D.C. The objective of NACAA is to coordinate the air quality activities of state and local air pollution control officials at the national level and to engage in activities that enhance the effectiveness of their agencies. NACAA disseminates information through a variety of means (e.g., electronic newsletter, website, email, technical committees), plans and sponsors conferences and technical workshops (e.g., mobile source air quality, air pollution awareness, membership meetings) serves as a state/local liaison to EPA, coordinates member participation on EPA and joint State-EPA technical committees, produces technical assistance for members such as model rules and implementation strategies, and addresses air pollution control issues in concert with other public and private interests.

Funding for NACAA has been identified as part of the national allocation at the request of the member state and local air pollution control agencies for numerous years. A jurisdiction not participating in NACAA does not provide any of its allotted funds for support of the Secretariat. Traditionally, the NACAA executive board (comprised of state and local air pollution control officials) acts on a staff request for a two-year period and requests that EPA set aside funds from the participating state and local agencies' grant funds on a proportional (i.e., population) basis.

Since NACAA is forward-funded, fiscal year funds go to support operations for the ensuing fiscal year. Following state and local membership approval, EPA did approve a two-year request for NACAA for the two-year period of FY 2008-2009. NACAA is receiving just over $1.5 million in FY 2007 STAG funds for its FY 2008 grant year and proposes to receive $1.58 million in FY 2008 funds for its FY 2009 fiscal year. These funds were requested by member state and local agencies to be set-aside by EPA from what would have been their grant allotment. Six states alternatively request that NACAA direct bill them for their contributions as their preferred payment approach. Since NACAA has not yet prepared a FY 2010 budget, the amount of federal FY 2009 funds to be requested is not yet known.

As noted earlier, the Deputy Administrator has determined that before EPA can take funds off the top of a continuing state program allotment funded under 40 CFR 35 Subpart A to fund an eligible co-regulator organization like NACAA, EPA must first receive an assurance of prior concurrence from the head of any State environmental agency or department affected. While EPA is not prescribing an approach for doing this, OAR is advising that this assurance be obtained as part of the annual grant negotiation process for both state and direct-funded local air pollution control agencies.[10] The concurrence should be documented by EPA in the recipient's

10 Since NACAA membership is composed of both state and local direct-funded grant recipients, direct funded

grant file. Notwithstanding this assurance, note that actual award would still depend upon EPA's review and formal approval of the application package. EPA will provide a state-by-state breakout of share contributions once the all concurrences are received. For more information, contact William Houck at 202-564-1349 or via email at – houck.william@epa.gov.

Program Support for States/Locals

CAIR Seasonal NOx Trading Program

NOx emissions from electric power generation and other major stationary sources contribute significantly to the formation of ground-level ozone, a serious public health and environmental problem. Long-range transport of ozone and precursor pollutants means that problem analysis and mitigation must involve all of the jurisdictions with sources contributing to, and populations affected by, these pollutants. Experience has demonstrated that one of the most effective ways to achieve this is through a multi-jurisdictional, market-based approach using a well-designed, centrally-administered NOx emissions budget and trading system. States affected by the NOx SIP Call adopted this approach as part of their NOx State Implementation Plans.

Highlights

- NOx Budget program (NBP) phased out.
- All NBP states plus 6 new non-NBP states participating in CAIR seasonal NOx trading program.
- Initial compliance season for CAIR seasonal NOx program (May 1 – Sep 30, 2009).

For FY 2007 and proposed for 2008, OAR allocated approximately $2.3 million for support of the NOx Budget Program (NBP) for states affected under the NOx SIP Call and for transition of these states and additional non-NBP states into the CAIR seasonal NOx program. There were 2,579 affected, non-exempt units under the NBP in 2006 and all were required to comply for the full ozone season, May 1 through September 30. Through a wide range of pollution control strategies and an active NOx allowance trading market in 2006, sources achieved over 99 percent compliance with the NBP. Allowance trading activity in 2006 was up slightly from 2005 levels and the volume of emissions data processed by EPA has increased almost 300% over the original OTC Program. In FY 2008, units in six additional states, which were not subject to the NBP, began required monitoring and reporting emissions data for the CAIR seasonal NOx program. The initial compliance season for the CAIR seasonal NOx program is May 1 – September 30, 2009.

In FY 2008, EPA continued development and testing of the Emissions Collection and Monitoring Plan System (ECMPS) which will provide users with a single client tool for checking and submitting data, direct access to EPA's database via this tool, and the ability to quality assure data prior to submission. Additional information on the ECMPS, including schedules for beta testing and system roll out may be found at www.epa.gov/airmarkets/business/ecmps/index.html. Several software development activities to contain or lower program operating costs are nearing completion and, as a result, the processing costs per source have been reduced to approximately $665 per affected unit. OAR will allocate approximately $2.3 million annually in FY 2009, consistent with FY 2007 and proposed 2008 levels, across the 27 states and D.C. participating in the CAIR seasonal NOx trading program for operation of this program.

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local agencies are also affected and should assure this prior concurrence. Pass-through local agencies do not have a direct grant relationship with EPA and would need to consult with their state.

EPA administers the trading program on behalf of the states through a national contract as associated program support. Through FY 2009, support for the NBP trading program has come from the grant funds of the affected states. State shares are based on the number of affected sources per state times a unit cost per source. Funds that would normally go to the states through EPA's region-by-region allotment are instead targeted to support the NBP/CAIR seasonal NOx trading program in advance of actual allotment to the affected states. Accordingly, this support is not included in individual state grant agreements and does not affect a state's cost-sharing requirements. Jurisdictions not affected or not participating in the trading programs have not had to contribute their grant resources to support them. For example, Georgia is not included in the system.

Table A-2. Comparison of NOx Budget Program and CAIR Seasonal NOx Program Allocations by Region and State

Region/ State	NOx Budget Program Cost FY2006	Units in CAIR Seasonal Program *(Updated 10/01/2006)*	CAIR Seasonal Program Cost* FY2007-2009
Region I	$204,101	173	$115,045
Connecticut	$65,216	62	$41,230
Massachusetts	$114,731	90	$59,850
New Hampshire	$13,285	10	$6,650
Rhode Island	$10,869	11	$7,315
Region 2	$596,603	541	$359,765
New Jersey	$216,178	178	$118,370
New York	$380,425	363	$241,395
Region 3	$559,165	523	$347,795
Delaware	$41,062	40	$26,600
District of Columbia	$9,662	5	$3,325
Maryland	$78,500	50	$33,250
Pennsylvania	$260,863	211	$140,315
Virginia	$101,447	137	$91,105
West Virginia	$67,631	80	$53,200
Region 4	$513,272	1,001	$665,665
Alabama	$83,331	126	$83,790
Florida		299	$198,835
Kentucky	$90,577	109	$72,485
Mississippi		103	$68,495
North Carolina	$129,224	159	$105,735
South Carolina	$90,577	100	$66,500
Tennessee	$119,562	105	$69,825
Region 5	$642,496	924	$609,856
Illinois	$178,739	280	$181,596
Indiana	$169,078	187	$124,355
Michigan	$119,562	158	$105,070
Ohio	$175,116	193	$128,345
Wisconsin		106	$70,490
Region 6		156	$103,740
Arkansas		49	$32,585
Louisana		107	$71,155
Region 7	$21,739	189	$125,685
Iowa		68	$45,220
Missouri	$21,739	121	$80,465
Total Annual $	**$2,537,376**	**3,507**	**$2,327,551**

- Processing cost per source is calculated to be $665 by OAP/CAMD.

For fiscal years 2007 through 2009, because of operating efficiencies, CAIR seasonal NOx program costs are anticipated to be lower relative to NBP costs in FY 2006. This is occurring at the same time that additional sources and additional states are being added to the program (see table A-2). Accordingly, the contributions of the NBP states that were participating in the program in FY 2006 will remain the same or be reduced. Non-NBP states joining the CAIR seasonal NOx trading program would show a new contribution based upon their cost per unit (source). For more information contact Larry Kertcher at 202-343-9121 or Doris Price at 202-343-9067.

Clean Air Act Training

CAA §103(b) authorizes EPA to provide training for air pollution control personnel and agencies and to make training grants to air pollution control agencies and other qualified entities related to the causes, effects, extent, prevention and control of air pollution. In addition to the Agency resources that EPA targets, EPA proposes to target approximately $2 million in STAG funds for the support of Clean Air Act training provided by multi-jurisdictional organizations and other state training programs in FY 2009. This is the same level of funds proposed in FY 2008 and is subject to consultation and concurrence with participating state and local air pollution control agencies. EPA is seeking comment on the level and approach taken to funding CAA-related training in FY 2009 and beyond. For more information contact Debbie Stackhouse in the Office of Air Quality Planning and Standards at 919-541-5281.

Section IV. AMBIENT MONITORING

Operation and continuous improvement of the ambient air monitoring networks support the National Ambient Air Quality Standards (NAAQS), public reporting and forecasting of the Air Quality Index, and provide input to health and atmospheric science to better inform future reviews of the NAAQS.

Monitoring Highlights

- Monitoring implications for revised NAAQS
  - Ozone NAAQS final due in March 2008
  - Lead (Pb) NAAQS final due in September 2008
- Continued improvement of the ambient air monitoring program:
  - Annual monitoring network plans
  - Waiting for possible Federal Equivalent Method (FEM) status for $PM_{2.5}$ continuous monitors.
  - PAMS assessment underway
  - Daily speciation sampling in a small number of cities to support multiple objectives including accelerating the pace of health studies
  - Increased emphasis on special "multi-pollutant" studies as part of next community-scale solicitation.
  - Characterization of Hazardous Air Pollutant (HAP) metals in the coarse particle fraction as part of air toxics method development.
- Budget transition issues
  - Reassessment plans for section 105 funds and monitoring input
  - Transition of $PM_{2.5}$ monitoring funds to section 103

EPA has been working with its State, local, and Tribal air monitoring partners over several years to continuously improve the ambient air monitoring networks for current and future needs. This work had a significant milestone on October 17, 2006 when EPA finalized a major restructuring of the ambient air monitoring regulations. In a separate final rule on this same date, EPA also finalized revisions to the National Ambient Air Quality Standard (NAAQS) for particulate matter. Together, the revisions restructure the networks for criteria pollutant monitoring of both gases and particulate matter. Consultation with, and peer review from, the Clean Air Scientific Advisory Committee (CASAC) and its Ambient Air Monitoring and Methods Subcommittee has driven the changes to the monitoring rules including those changes related to the PM NAAQS. The rest of the final rule changes, some of which affect PM

NAAQS monitoring, are based on the recommendations from the December 2005 draft National Ambient Air Monitoring Strategy (NAAMS) (see http://www.epa.gov/ttn/amtic/monstratdoc.html).

The draft national strategy has been developed over the last several years by EPA and its State, local and Tribal partners that operate the nation's ambient air monitoring networks. A major purpose of the strategy is to optimize the networks to be more responsive to current and future needs (e.g., assess air quality trends, better characterize the multi-pollutant nature of air pollution, provide for more timely information through continuous monitoring, better support development of improved air quality simulation models, etc.). Accordingly, the new monitoring regulations: remove network minimums for some pollutants, lower minimum requirements for others, eliminate the National Air Monitoring Station (NAMS) designation, and reduce the requirements for photochemical assessment monitoring stations (PAMS). The new regulations also add some new monitoring requirements with implementation dates ranging from January 1, 2007 to January 1, 2011.

This document provides guidance for the use of particulate matter (PM), other criteria pollutants, PAMS, and air toxics monitoring resources, and reflects the emerging direction provided for in the draft national strategy. The guidance has been prepared consistent with the revisions to the ambient air monitoring regulations for applicable monitoring of PM, PM speciation, other criteria pollutants, PAMS, and NCore multi-pollutant sites.

Highlights of Changes in Monitoring Funding for FY 2008 and 2009

The FY 2008 operating plan includes funding for $PM_{2.5}$ and Air Toxics through §103 funding at levels consistent with prior year funding. PAMS funding is provided at the same level as previous years ($14M) as a part of §105 funding to those Regions with PAMS areas. All other monitoring operations are funded with §105 funds and State or local funding as part of the minimally required match to §105 funding. Specific details of EPA's plans for monitoring funding in 2008 and 2009 follow.

- The FY 2009 President's budget request includes $25.5M for the $PM_{2.5}$ monitoring program, representing 60 percent of the $42.5M historically provided for the $PM_{2.5}$ monitoring program. The President's budget does not include §103 authority for $PM_{2.5}$ monitoring. This means the program will be included in the continuing §105 program requiring a non-Federal match of 40 percent. In negotiating grants using FY 2009 funds, EPA's priority will be that essential monitoring for protection of public health from PM exposure above the NAAQS will not be compromised. It is EPA's intention to negotiate grant work plans and accountability measures that ensure that $PM_{2.5}$ monitoring activities required by regulation, needed for the development of SIPs, or needed for informing the public of days with unhealthy air quality are continued.

- The FY 2008 allocation proposed using the same funding allocation by Region as FY 2007 when considering cost per month of operating the existing network. This cost per month is based on examining prior year grants in detail and determining a cost per month for each grantee. For FY 2007 all $PM_{2.5}$ monitoring grants are to be scheduled to end on March 31, 2008. For FY2008 all $PM_{2.5}$ monitoring grants are to be scheduled to end on March 31, 2009. Therefore, funding for FY2008 will be for a 12 month period beginning April 1, 2008. $PM_{2.5}$ monitoring funding for FY 2009 is scheduled to transition to section 105 funding beginning on April 1, 2009.

- If, after the 2007 $PM_{2.5}$ monitoring grants end on March 31, 2008 and are closed out an expected 90 days later, there are available funds turned back to EPA, the remaining funds will be targeted for one-time equipment upgrades and enhancements within the $PM_{2.5}$ monitoring and associated NCore monitoring programs. Specifically uses of funds include providing resources for finishing the carbon channel change-out of the chemical speciation network (CSN), equipment needs to support previously unfunded minimum network requirements, Federal Equivalent $PM_{2.5}$ continuous monitors, continuous speciation monitors that can be used to complement existing integrated speciation samplers in areas with a need for a daily signal of chemical speciation, and additional infrastructure capacity building at NCore stations such as for high-sensitivity gas analyzers, calibrators, zero-gas generators, manifolds, $PM_{10-2.5}$ monitors, meteorological equipment, and ammonia and nitric acid sampling. Funds are to be aggregated nationally and redistributed to Regional Offices or purchased nationally, if necessary, to support these equipment investments. Nominal replacement of exiting $PM_{2.5}$ monitoring equipment (e.g., FRMs) is to be funded out of each agencies regular $PM_{2.5}$ monitoring grant.

- The October 17, 2006 revisions to the ambient air monitoring regulations provide an opportunity for divestment of low-value monitoring for several NAAQS pollutants (i.e., CO, SO_2, NO_2, and PM_{10}). EPA anticipates monitoring reductions for these pollutants. Such reductions are anticipated in the draft National Ambient Air Monitoring Strategy and are facilitated by the changes in the monitoring regulations mentioned above.

- There will be changes in the unit cost of $PM_{2.5}$ filters and speciation laboratory services provided as associated program support due to pre-negotiated contract increases in unit prices. As a placeholder until monitoring agencies inform EPA of their planned use of filters and laboratory services in 2008, EPA will initially reserve funds as associated program support based on an assumption that the number of filters and the number of monitoring sites requiring laboratory services will be the same in 2009 as in 2008.

- Funding for the portion of the IMPROVE program that addresses progress in improving visibility in Class I areas will remain the same as in previous years.

- The level of funds for the nationally administered, independent Performance Evaluation Program (PEP) provided as associated program support for $PM_{2.5}$ monitoring is expected to be approximately $1.4 million. Savings could be made if States with multiple monitoring organizations could consolidate into one Primary Quality Assurance Organization. Many States with one or more local agencies have already accomplished this effort; however, others have not. By becoming one PQAO, a State can reduce the number of required PEP audits and therefore the costs associated with those audits. Monitoring agencies with an adequate level of independence between quality assurance and monitoring groups may conduct the PEP themselves. In these cases monitoring agencies that conduct the PEP will receive the refundable portion of the EPA program costs that would otherwise have been used to pay for EPA Regional lab contract staff.

- While EPA considers the overall size of the existing $PM_{2.5}$ Federal Reference Method (FRM)/Federal Equivalent Method (FEM) network adequate for implementing the revised NAAQS, Regional Offices and the States should consider: (a) whether the current network of FRM/FEM and supplemental $PM_{2.5}$ speciation sites is optimal for supporting implementation of the revised $PM_{2.5}$ NAAQS, and (b) how samplers among stations and even funds among states would need to be shifted to provide equitable access to the speciation data needed to understand the causes of 24-hour NAAQS nonattainment for each prospective nonattainment area. Also,

changes in population exposure and emissions patterns may mean that a small number of sites each year may need to be re-located.

- The 24-hour PM_{10} standard protects the public from effects of short-term exposure to inhalable coarse particles, and PM_{10} monitoring should continue in areas at risk of violating that standard. In other areas, reductions in PM_{10} monitoring may be appropriate.

- As one of the NCore multi-pollutant monitoring requirements, EPA is requiring $PM_{10-2.5}$ mass (using the new federal reference method or a future equivalent method) and $PM_{10-2.5}$ speciation (no method yet specified) at between 62 and 71 locations. Since NCore is not required to be operational until January 1, 2011, the FY 2009 allocation will not specifically target funds for the creation of $PM_{10-2.5}$ mass or speciation measurements. Also, while $PM_{10-2.5}$ mass measurements can be easily obtained using collocated low-volume PM_{10} and $PM_{2.5}$ samplers, EPA has not fully researched and developed a method for $PM_{10-2.5}$ speciation. For 2009, EPA encourages the mass measurement of $PM_{10-2.5}$ at NCore and other important sites as determined within monitoring agencies. Since $PM_{10-2.5}$ speciation is not fully developed, EPA is only encouraging this measurement as part of special projects and studies designed to address specific issues and not part of any routine monitoring operation.

- For 2009 EPA anticipates a stable network of $PM_{2.5}$ speciation trends sites. However, some of the supplemental speciation and State/local IMPROVE protocol sites may move due to network needs or shut down due to funding limitations.

- In FY 2010, EPA also anticipates that there may be shifts in $PM_{2.5}$ monitoring funds among Regions to reflect further transition to continuous $PM_{2.5}$ instruments, addition of precursor gas monitoring capability at NCore multi-pollutant sites, and discontinuation of additional $PM_{2.5}$ speciation sites.

- In FY 2009, EPA anticipates funding Air Toxics monitoring at the existing 28 National Air Toxics Trends Stations. New for FY2009 the air toxics monitoring program will have an emphasis on special "multi-pollutant" studies as part of next community-scale solicitation and characterization of Hazardous Air Pollutant (HAP) metals in the coarse particle fraction as part of air toxics method development.

Fine Particulate ($PM_{2.5}$) Monitoring Network

On October 17, 2006 EPA revised the $PM_{2.5}$ NAAQS by lowering the 24-hour (or daily) standard from 65µg/m^3 to 35µg/m^3. EPA also retained the existing annual fine particle standard at 15 µg/m^3. In both the pre-existing and new monitoring rules supporting the $PM_{2.5}$ NAAQS, EPA requires monitoring agencies to locate at least one $PM_{2.5}$ monitoring site for each MSA in a population-oriented area of expected maximum concentration. Under the former $PM_{2.5}$ NAAQS, the design values for almost all non-attainment areas were driven by the annual NAAQS. With the new lower $PM_{2.5}$ daily NAAQS, a majority of areas will be driven by the daily NAAQS. However, in most cases the area of expected maximum concentration will be the same.

In planning a $PM_{2.5}$ monitoring network for 2009, agencies will need to consider how their networks are addressing the network design requirements as part of their annual network reviews due this coming summer. In a small number of cases, a new monitoring site may need to

start up; in other cases, sites may need to move. Overall, fewer sites are required under the new monitoring requirements due to fewer sites being required in large urban areas and by eliminating a requirement for monitoring in areas outside of a metropolitan area other than background and transport sites. Although fewer sites are required, EPA envisions that state/local agencies will maintain a large robust network of $PM_{2.5}$ monitors to support several monitoring objectives including protection of public health through the NAAQS.

The $PM_{2.5}$ monitoring network includes three well-established components: the network of filter-based FRM/FEMs used for comparison to the NAAQS; continuous mass monitors used in public reporting of the Air Quality Index; and speciation program samplers and monitors including the Speciation Trends Network, supplemental speciation sites, and the IMPROVE program used to characterize the chemical composition that makes up fine particulate matter. Smaller dynamic components of the $PM_{2.5}$ monitoring program include a small network of continuous speciation monitors and the measurement of precursors to $PM_{2.5}$ at NCore multi-pollutant stations. Areas of interest to enhance PM monitoring include reinvesting monitoring resources into high sensitivity monitoring of CO, SO_2, and NO_2/NO_y to better characterize precursor gases that lead to particle formation, expanding the network of $PM_{2.5}$ continuous monitors, and planning for daily speciation sampling in a small number of the most populated cites in the country where this information can support data needs in a State and for use in helping expedite health studies.

In December of 2005, EPA posted its Draft of the National Ambient Air Monitoring Strategy (NAAMS) on EPA's website at http://www.epa.gov/ttn/amtic/monstratdoc.html. To the extent possible this grant guidance has been developed consistent with the NAAMS as well as the revisions to the ambient air monitoring regulations.

Overall Direction

By January 1, 2008, any new $PM_{2.5}$ monitoring sites or monitors required as a result of the minimum monitoring requirements specified in Table D-5 of Appendix D to Part 58 were to have begun operation, unless the Regional Administrator approved a modification of the requirement. In the new monitoring requirements, EPA took an approach that considers the relative design value of an MSA and its population to determine the minimal required number of sites for each area. The new monitoring requirements provided criteria resulting in deployment of additional FRM/FEM/ARM monitors for approximately a dozen MSAs. The prospective allocation of FY 2008 funds has taken into consideration the need for these monitors. The new regulation also requires more continuous analyzers than previously required, also by January 1, 2008. In some cases it may make sense to modify the required start date for new continuous monitors until vendors are offering continuous instruments that have been approved as federal equivalent methods (FEM) or monitoring organizations themselves have applied for and received approval for continuous approved regional methods (ARM). Priority for funds within the FY 2008 Regional allocations usually should be given to newly required monitoring in nonattainment areas. The FY 2009 allocation will consider the need to continue operation of new monitors.

FY 2009 continues a multi-year transition of the ambient air monitoring conducted by state and local air monitoring agencies along the path set by the draft of the NAAMS. For $PM_{2.5}$ this means continued operation of high value federal reference method (FRM) and speciation sites; $PM_{2.5}$ continuous monitoring and associated data management systems for timely reporting

of high quality data; and precursor gas analyzers, data analyses and quality assurance activities that will support better understanding of particle formation.

The restructured networks will continue operation of high value sites, with investments and divestments. To provide a clearer understanding of the expected outcomes of the ambient air monitoring objectives, the following goals for the fine particulate monitoring network have been developed:

- Appropriate spatial characterization of $PM_{2.5}$ NAAQS;
- Public Reporting of $PM_{2.5}$ in the AQI;
- Characterization of $PM_{2.5}$ chemical speciation data for long term trends, development and accountability of emission control programs, tracking of regional haze, and for use in health studies;
- Implementation of NCore CO, SO_2, NO_2/NO_y and NH_3 trace-level monitoring to support characterization of PM precursors;
- Assessment of $PM_{2.5}$ data quality;
- Procurement and testing of $PM_{2.5}$ filters.

Divestments

In the revisions to the ambient air monitoring regulations, EPA finalized reductions to the required number of FRM/FEM in larger cities and eliminated FRM/FEM requirements for some rural areas. For some areas, especially large cities well below the proposed NAAQS, this may provide an opportunity to divest of one or more redundant monitoring sites. For other areas it may provide an opportunity to move one or more sites, which are not the design value sites, to get a better spatial characterization of $PM_{2.5}$ or seek locations that may potentially be a concern with a lower daily $PM_{2.5}$ NAAQS, as currently proposed.

Chemical speciation data from the Speciation Trends Network, IMPROVE, and the remaining supplemental speciation sites will continue to be utilized to track progress over time as the national and local control programs are implemented. There are some areas that are expected to be in residual nonattainment for $PM_{2.5}$ even after the national control strategies are implemented that may have attainment deadlines beyond 2009, or that may be designated nonattainment with the revised 24-hour $PM_{2.5}$ NAAQS. In these cases the Regional Office and the State, and where appropriate, local agencies, should work out an appropriate network design for the chemical speciation component of their $PM_{2.5}$ monitoring network within the available allocation, as part of their annual network review. States and local agencies may consider divesting of low-value supplemental speciation stations in areas that are not expected to be in violation of the $PM_{2.5}$ NAAQS.

In the revisions to the ambient air monitoring regulations, EPA finalized new requirements for the number of required Performance Evaluation Program (PEP) audits that result in an overall national reduction in the required number of site audit days. It is anticipated that costs of the PEP will be about $1.4 million for FY09 which is approximately $350K less than in FY 2006 under the older requirements. Costs for the PEP to a monitoring organization are determined by the number of sites within a monitoring organization. States with multiple monitoring agencies not already organized under one Primary Quality Assurance Organization should consider doing so to save minimize the number of required audits.

As in 2008, monitoring organizations will again be asked to determine whether they plan on implementing the $PM_{2.5}$ Performance Evaluation Program (PEP) or allow for continued Federal implementation of this program. Monitoring organizations must meet the minimum requirements of adequate and independent in order to implement the PEP. OAQPS has provided guidance to Regional Offices, in memo form, on how to assess adequacy and independence of proposed audit programs.[11] Information on this decision process will be provided in a memorandum from the EPA Regional Office to the monitoring organizations each year in order to make decisions that will affect the next calendar year audit activities. OAQPS anticipates that a FY 2009 guidance memorandum covering details on participation in the $PM_{2.5}$ PEP will be issued to the EPA Regional Offices in June 2008.

Investments

The revisions to the Ambient Air Monitoring Regulations published in the Federal Register on October 17, 2006 include new performance based criteria for approval of continuous $PM_{2.5}$ methods as equivalent to the filter-based FRM. These new criteria may result in $PM_{2.5}$ continuous methods appropriate for comparison to the NAAQS and for public reporting of the Air Quality Index (AQI). If one or more of these methods are approved, monitoring agencies could benefit by discontinuing operation of some or all (with the exception of required FRMs for QA purposes) of the FRMs, which tend to be costly to operate due to pre- and post- sampling laboratory analysis. These savings could be used to pay for some of the cost of the new monitors; however, capital acquisition funds would need to be provided up-front for the new monitors. Therefore, EPA Regions will work closely with State and local agencies within the existing funding allocations on whether new monitors should be purchased, if one or more $PM_{2.5}$ continuous methods become approved for comparison to the NAAQS.

Gas monitoring with high sensitivity measurements of CO, SO_2, and NO/NOy will continue as part of the $PM_{2.5}$ monitoring network to support characterization of PM precursors in FY 2008. Planning over the last few years has resulted in funding being available for all required NCore multi-pollutant sites for these pollutants using carryover funds from prior years and planned funds from fiscal years 2005 through 2007.

During 2007 EPA learned that one of the three primary FRMs used across the nation's monitoring network would no longer be commercially available. The instrument manufacturer of the Andersen FRM samplers was sold to what is now Thermo-Fisher, which also supplies R&P FRM samplers. As a result the instrument manufacturer has stated that it will attempt to continue supplying parts as they are available, but that it could not guarantee spare part availability and that it would eventually no longer support the FRM. Although Andersen FRMs are not used in an extensive number of State monitoring programs, they are used in several very large states that have many non-attainment areas (e.g., CA, GA, IL, OH, PA). The FY 2007 allocation provided each Regional Office targeted funds equal to one-half the estimated cost of replacing all Anderson samplers in the Region. Regional Offices were to work with monitoring organizations on plans for which Anderson samplers should be replaced immediately with these funds and how a transition to another sampler model would be achieved for the remaining sites using Anderson samplers. A special allocation of funds for replacement of Anderson samplers

11 January 8, 2007 memo from Phil Lorang (Ambient Air Monitoring Group Leader) to Regional Office ambient monitoring managers.

was not provided in FY 2008 and is not planned for FY 2009. EPA encourages monitoring organizations to collaborate in this process. For example, organizations which replace their Anderson samplers first could make their retired samplers available to other organizations for use as backups and spare parts.

In addition to nominal replacement of $PM_{2.5}$ monitoring equipment over a several year period, there are a few important equipment issues worth noting in this grant guidance. In FY 2006 through 2008 EPA planned and implemented a new carbon sampler for each Chemical Speciation Network (CSN) site. EPA targeted funds for purchase and implementation of the URG 3000N sampler to be used in sampling fine particulate for carbon. EPA also targeted funds for the incremental cost of laboratory analysis for this sampler. Total funds of the carbon channel change-out were targeted in the amount of $800,000 in FY2006, and $835,385 in FY2007. EPA is planning to target funds in the amount of $1,152,606 for FY2008, which if fully funded, will be the last year of the carbon channel change-out. Note: funds are higher for this last year as all sites will have incremental laboratory costs and the last phase contains the most locations to convert. EPA is able to pay for this upgrade within the allocation typically used on $PM_{2.5}$ speciation contract support by lowering the shipping costs associated with each sample. The new carbon sampler is intended to ensure optimal comparability of carbon data across all speciation network data (i.e., IMPROVE and CSN). If the FY 2008 funding is not sufficient to provide the new carbon channel at every remaining speciation monitoring site, and some sites will have to wait until 2009, EPA will target additional funding in FY 2009; however, at this time EPA does not expect to need to do this. Monitoring organizations which would not otherwise have all their sites modified in 2008 can choose to direct some of the FY 2008 funding that would otherwise be awarded to them to be used to accelerate the conversion process and complete it in 2008.

EPA will also be working with State and local agencies to pilot a small number of $PM_{2.5}$ continuous mass monitors and ammonia samplers where funds are available.

Monitoring agencies may also find it useful to use a portion of their direct awards to implement additional meteorology equipment that supports forecasting of the AQI.

For FY 2008, $PM_{2.5}$ monitoring grant funds allocated to states can be directed towards improvements in data management systems to support timely reporting of high quality data from PM continuous mass monitors, PM continuous speciation monitors, and precursor gas monitors. Resources dedicated to this area will support processing, validating, and reporting or data that supports the PM monitoring program.

Distribution of Funds

In FY 2006 and earlier years, EPA's national guidance set aside $PM_{2.5}$ monitoring funds for use in funding several categories of associated program support, allocated the remaining funds among the Regional Offices for use in direct grants, and provided targets or suggestions for how the Regions might negotiate funding levels for specific categories of state/local monitoring activities, for example operation of filter-based monitors versus continuous monitors. For historical context, Table A-3 shows this guidance for FY 2006 and FY 2007. For FY 2007, EPA restructured the targeted categories of program support and state/local monitoring operations to focus more on activities that are of current special interest, for example new monitoring sites required as a result of the revised 24-hour PM2.5 NAAQS. The new categories

of monitoring activities and their suggested funding levels for FY 2007 are given in Table A-4, which also shows the Regional Office allocations. In FY 2007, EPA worked with grant recipients to develop work plans that were intended to utilize available FY 2007 and earlier funding by a common date of March 31, 2008, at which time FY 2008 funding would begin. For some recipients, this meant a grant period different than 12 months. The savings in shorter grant periods for these recipients have been reapplied to meet the listed types of new monitoring needs wherever they exist.

Because EPA has not finished consulting with stakeholders about how to allocate FY 2009 $PM_{2.5}$ monitoring funding in light of the status of the PM2.5 NAAQS, the reduced level of federal funding, and the new considerations of 40/60 funding matching and continued level of effort under section 105 funding authority, this guidance does not yet present an allocation of funds among Regional Offices for use in direct awards. A preliminary allocation among categories of associated program support is given in Table A-4, but this allocation is based on a placeholder assumption that monitoring organizations will not reduce their networks (and the services/materials needed to support them) in 2009 compared to previous years. These cost estimates are to help inform how the program costs may change this coming year and are subject to change based on monitoring organizations' actual plans for the numbers of sites that will need these services in FY 2009. These numbers may decline if States choose not to maintain their existing $PM_{2.5}$ monitoring networks.

Tables A-3 and A-4 (see separate attachments) do not attempt to list every expense a State or local Agency may have in operating their networks. State and local agencies have costs associated with many activities within each monitoring program area. Some of these costs are fairly well understood such as capital infrastructure, salaries of staff and management working on the program, and costs of expendable items used in the program. Less obvious, but important to include in planning operation of a network, are costs of participating in conferences and workshops that support training and building further expertise in agencies operating the network.

For more information on $PM_{2.5}$ monitoring, contact Tim Hanley at 919-541-4417 or via mail at hanley.tim@epa.gov.

Monitoring Networks for Other NAAQS Pollutants (and $PM_{10-2.5}$)

Support of Established NAAQS Networks

This section covers monitoring networks for the other pollutants covered by a NAAQS -- ozone, CO, SO_2, NO_2, Pb, and PM_{10}, -- and $PM_{10-2.5}$.[12] For FY 2009, State and local agencies should continue to improve their monitoring networks for these pollutants by working with their EPA Regional Office to divest of low value monitoring and invest those resources into higher

12 On October 17, EPA revoked the annual PM10 NAAQS everywhere. 71 FR 61144. The 24-hour PM10 NAAQS was retained everywhere. No NAAQS was established for PM10-2.5. On the same day, EPA also promulgated a Federal Reference Method for PM10-2.5 and certain monitoring requirements for $PM_{10-2.5}$, with an implementation date of January 1, 2011. 71 FR 61236. A plan for the $PM_{10-2.5}$ monitoring program is due by July 1, 2009. FY 2008 grant funds should be used to begin development of this plan. EPA is not requiring that any FY 2008 grant funds be used to implement $PM_{10-2.5}$ monitoring, although that is an eligible use of grant funds where negotiated between a Regional Office and a recipient.

priority monitoring and monitoring related activities. Amendments to the monitoring regulations promulgated on October 17, 2007 provide State and local agencies the flexibility to make these refinements, subject to EPA approval.

Of the pollutants noted above, both ozone (O_3) and lead (Pb) are to complete NAAQS reviews during 2008. If there are changes to the level of protection of these NAAQS or to the network design criteria then EPA will need to revisit how any allocation scheme is provided in support of monitoring activities for these pollutants. EPA will work closely with monitoring agencies directly through each EPA Regional Office and nationally through stakeholders groups (e.g., the National Association of Clean Air Agencies) if changes to the NAAQS warrant reprioritizing monitoring resources. A final decision of the ozone NAAQS is expected in April of 2008. A final decision on the lead (Pb) NAAQS is expected in September of 2008.

Although a final decision on a change to the ozone NAAQS is not available at the time this section was written, ozone remains a nationally pervasive pollutant with respect to the heath-related levels established by the NAAQS. The other NAAQS pollutants may still be of interest depending on local needs and use of the data for other monitoring objectives. Gaseous pollutants such as CO, SO_2, and NO_2, if measured with appropriate sensitivity, can be used in analysis and models to evaluate control strategy development for O_3 and fine particles, and to provide accountability for those control strategies after they have been implemented. Such an effort represents a multi-pollutant approach to utilizing monitoring data for air quality management. This is consistent with recent critical reviews of EPA's air programs and one of the key aspects of the national monitoring strategy.

For CO, SO_2, NO_2, PM_{10} and PAMS, EPA expects monitoring agencies to identify low value monitoring sites and re-target those resources towards higher priority monitoring needs, monitoring related activities such as data assessment, planned replacement of aging equipment, quality assurance activities, and technology investments. For O_3 (which is measured in part by the Photochemical Assessment Monitoring System network or PAMS), EPA believes there are an appropriate number of monitoring sites nationally to support the existing NAAQS, although the locations of these monitoring sites are not always spatially optimized. EPA expects to revisit the network design needs of ozone, as necessary, once a final decision on the level of primary and secondary forms of the ozone NAAQS are finalized. If the ozone NAAQS is revised to be more stringent, ozone networks will require review to ensure compliance with 40 CFR 58 Appendix D requirements, as these are based on percentages of the NAAQS. These requirements may be modified by the Regional Administrator.

FY 2009 STAG grant funds for the aforementioned ambient monitoring programs should be utilized to provide:

- National and local spatial characterization of O_3 relative to the NAAQS;
- National and local public reporting of O_3 in the AQI;
- Local public reporting of CO, SO_2, NO_2, and PM_{10} in the AQI for areas where these pollutants are of concern;
- Local characterization of the CO, SO_2, NO_2, and PM_{10} NAAQS in the few areas with NAAQS non-attainment and maintenance issues;
- Planning network design for a revised Pb NAAQS, if applicable;

- In addition to the monitoring provided for above, limited characterization of O_3, CO, SO_2, NO_2, Pb, and PM_{10} data in all other areas for long term trends, support for long-term health and scientific assessments, and development and accountability of emission control programs as part of a multi-pollutant approach to air quality management;
- Assessment of O_3, CO, SO_2, NO_2, Pb, and PM_{10} data quality;
- Analysis and interpretation of the O_3, PAMS, CO, SO_2, NO_2, Pb, and PM_{10} monitoring data and development of data assessment tools;
- Procurement and testing of PM_{10} filters, including 46.2 mm Teflon filters used in low-volume PM_{10} samplers;
- Independent and adequate assessment of these pollutants' data quality, which is required in 40 CFR Part 58. This assessment is based on audit data generated under the National Performance Audit Program (NPAP). State and local agencies will choose either to obtain audit services through EPA-managed contracts funded with STAG funds, or may operate equivalent state-managed programs using independent staff, equipment, and standards. In some Regions, Regional Office staff may perform or assist in audits with no charge to STAG funds, depending on staff and travel funds availability.

National Performance Audit Program (NPAP)

The NPAP conducts performance evaluations – a type of audit where quantitative data is collected independently in order to evaluate the proficiency of an analyst, laboratory, or some or all of the component parts of a data collection activity. The NPAP is a cooperative effort among OAQPS, the EPA Regional Offices, the monitoring organizations that operate EPA-funded air pollution monitors, and the other organizations that operate air monitors for example at PSD sites. The implementation goals of the NPAP are to audit approximately 20 percent of the monitoring sites in the Ambient Air Quality Monitoring Network each year.

Although it is a goal to visit every monitoring site generating data that has significance to the air quality program within a 5-year period, among these there is an emphasis on auditing higher priority monitors (e.g., sites prioritized for health risk reasons) more frequently. In 2008, the requirement for adequate independent audits applies to sites designated as SLAMS and PAMS, and the NPAP program accordingly will cover only these sites; SPMs using FRM or FEM methods become subject to the requirement for adequate and independent audits on January 1, 2009. The NPAP program uses a through-the-probe (TTP) audit system, where appropriate for the monitoring situation given a site's physical layout. This system has the advantage of testing the performance of the entire monitoring station including inlets and manifolds, and of providing station operators immediate feedback on the accuracy of locally conducted measurements.

Each year, monitoring organizations are asked whether they plan on implementing the NPAP or would prefer continued Federal implementation of this program using STAG funds. Any non-EPA audits arranged by monitoring organizations must meet the minimum requirements of being adequate and independent. Additional guidance on demonstrating that a state-implemented program meets these minimums will be provided in a memorandum early in the calendar year. Under this approach EPA reserves a portion of appropriated STAG funds to

cover potential Federal implementation of the NPAP, based on the number of geographically separate monitoring sites (not the number of distinct monitors) within each EPA Region.

The initial reserve of FY 2009 funds is estimated to be approximately $398,000. This is based on EPA's current understanding of monitoring organizations' intentions for how NPAP audits will be implemented in 2009. If the number of sites in a Region needing to be audited by EPA staff or EPA-managed contractors is reduced because more monitoring organizations plan on implementing a program of adequate and independent NPAP audits without reliance on EPA contractors, and those organizations are assessed by the EPA Regions as capable to perform the NPAP by September 2008, a corresponding amount of STAG funds will be made available to the Regional Office for allocation as direct awards. The amount of funds held by EPA to perform the NPAP includes both a fixed cost associated with programs tools and equipment such as SOP's and hardware and variable costs such as the operator time and travel costs associated with the number of audits conducted. The September 2008 cutoff date gives EPA time to make necessary contracting and other arrangements for the audits it will manage in 2009.

Photochemical Assessment Monitoring System (PAMS)

Required by section 182(c)(1) of the Clean Air Act, the PAMS program collects ambient air measurements in areas classified as serious, severe, or extreme ozone nonattainment. Each PAMS area collects data for a target list of volatile organic compounds (VOCs), NO_x, NO_y, and ozone, as well as surface and upper air meteorological measurements.

Monitoring rule amendments published on October 17, 2006 greatly reduced the minimum PAMS requirements. The revisions were intended to require the retention of the minimum common PAMS network elements necessary to meet the objectives of every PAMS program, while freeing up resources for states to tailor other features of their own PAMS networks to suit their specific data needs. Overall, the changes significantly reduced the costs of the minimum PAMS monitoring requirements, but it was not EPA's intention to require or encourage a reduction in the overall level of PAMS monitoring. The following summarizes the changes to the PAMS requirements:

- The number of required PAMS sites has been reduced. Only one Type 2 site is required per area regardless of population, and Type 4 sites are no longer required. Only one Type 1 or one Type 3 site is required per area.
- The requirements for speciated VOC measurements have been reduced. Speciated VOC measurements are only required at Type 2 sites and one other site (either Type 1 or Type 3) per PAMS area.
- Carbonyl sampling is no longer required.
- NO_2/NO_x monitors are required only at Type 2 sites.
- Trace level NO_2/NO_y are required at one site per PAMS area (either Type 1 or Type 3).
- Trace level CO is required only at Type 2 sites.

FY 2008 STAG funds will support four types of PAMS activities: monitoring system implementation and operation including replacement of aging equipment, data reporting to AQS, data analysis, and quality assurance. Also, Regions may approve the use of some of these funds to replace or upgrade aging or obsolete equipment. For FY 2009, as in recent years, about $14

million is targeted for operation of the PAMS network. Of this, $10.5 million has nominally been allocated for program implementation and operation, data reporting, and QA. $3.5 million has been nominally allocated for data analysis by state and local agencies. However, Regional Offices have had the flexibility to allow states to adjust this split and even to use a portion of their designated PAMS funds for other purposes. Table A-5 shows the FY 2007 allocation of PAMS funds among Regions. These PAMS funds are included in the Ozone row of the direct funds to Regions in Table A-8 in Section V of this appendix.

Table A-5. Distribution of Funds for PAMS Support

Region	Number of PAMS Areas	Data Analysis	Implementation and Operation	Total
1	5	$726,297	$2,125,815	$2,852,112
2	1	$232,415	$571,060	$803,475
3	3	$348,623	$1,087,907	$1,436,530
4	1	$145,259	$366,848	$512,107
5	21	$290,519	$959,749	$1,250,268
6	5	$617,603	$2,061,029	$2,678,632
7	0	$0	$0	$0
8	0	$0	$0	$0
9	82	$1,162,075	$3,307,303	$4,469,378
10	0	$0	$0	$0
Totals	24	$3,522,791	$10,479,711	$14,002,502

[1] Chicago and Milwaukee have a combined network.
[2] So. Coast & Mojave Desert AQMDs have a combined network

The reallocation study process now underway also provides EPA and its state/local partners an opportunity to critically re-examine the purposes, funding level, and basis for distribution of funds targeted for PAMS support. A variety of considerations could be involved including accounting for those areas subject to the changing PAMS rule requirements, relative ozone air quality, the robustness of the networks, dollar needs over time, etc. EPA would like to discuss the future of PAMS with the state and local agencies as part of the analysis process.

In addition to the reallocation study, EPA is also working with its State and local partners that are involved in PAMS in an assessment of the program. This PAMS assessment includes a workgroup of representatives from EPA, State, local, and multi-state organizations and a

contractor that will be conducting the assessment. The assessment is scheduled to be completed by September 30, 2008.

Notwithstanding a re-allocation, and in light of the recent changes in PAMS requirements, Regional offices should still re-examine the current split between data analysis and implementation and operations with their recipients rather than strictly adhere to the splits shown in Table A-5. Regional Offices may also consider other departures from historical funding practices, for example providing more funds to a particular state in FY 2009 to support a needed one-time intensive study, with temporarily reduced funding for routine PAMS monitoring in other states. In CY 2008 or 2009, resources permitting, EPA will issue a new technical guidance document to assist Regional Offices and states in evaluating the utility of the data collected by current PAMS networks and in identifying new types of PAMS monitoring that can provide useful missing data for ozone attainment planning.

OAR also recognizes that the PAMS sites are a major source of data on air toxics including some of the toxics that contribute significantly to the total risk from air toxics in some of the largest cities. The Regions, state and local monitoring agencies should keep this dual purpose in mind as the plan network changes in FY 2009 and beyond. For example, as speciated VOC sampling is reduced at type 4 sites, consideration should be given to moving to auto-GC sampling at the remaining PAMS sites.

FY 2008 PAMS Activities for State and Local Agencies

The allocated PAMS funds should be used to meet the following objectives:

(1) Continue System Implementation

- Reduce number of monitoring sites and monitoring at remaining sites, while remaining in compliance with revised PAMS regulations or approved alternative plans developed as part of reconfiguration efforts.
- Operate remaining existing sites, including replacement of aging equipment.
- Continue to improve NO_x monitoring, replacing NO_x instruments with NO_y/NO instrumentation and/or more sensitive NO_2/NO_x monitors at select PAMS sites.
- Install and operate trace level CO monitors at Type II sites.
- Develop and conduct area specific ozone precursor studies based on area specific needs.
- Continue making surface measurements of wind direction, wind speed, temperature, and humidity at all PAMS sites and additional measurements of solar radiation, ultraviolet radiation, pressure, and precipitation at one site in each PAMS area. Continue making upper-air measurements of wind direction, wind speed, and temperature at a representative location in each PAMS area. The upper-air monitoring program will depend upon region-specific factors such that the optimum design for a given PAMS region is expected to be some combination of remote sensing and conventional atmospheric soundings.
- For PAMS sites collocated with NCore multipollutant precursor gas sites, the meteorological monitoring data for ambient temperature, wind speed, wind direction, relative humidity, barometric pressure, and solar radiation are to be submitted to the AirNow program.

(2) Data Analysis

- Continue to develop and implement PAMS data analysis plans at the state and local levels that demonstrate use of data, provide analyses demonstrating data analysis products and results commensurate with allocated resources targeted for data analysis in grant work plans and the minimum set of PAMS data analyses specified in EPA guidance.
- Use PAMS data to develop and optimize control strategies in State Implementation Plan for ozone.
- Develop trends in ozone precursors, based on PAMS data, that may serve to corroborate "rate-of-progress" and accountability demonstrations.
- Use PAMS data to corroborate ozone precursor emissions inventories and to address transport concerns.

(3) Data Reporting

- All PAMS data, including meteorological data, shall be submitted into AQS consistent with 40 CFR Part 58.
- All PAMS data shall be identified in AQS as monitor type 'PAMS' or 'Unofficial PAMS.
- Adequate procedures must be developed and followed to ensure proper validation of data prior to submission to AQS.

(4) Quality Assurance

- All sites must have and operate according to a Quality Assurance Project Plan (QAPP) approved by an EPA Regional Office.
- Ensure that adequate and independent audits are conducted for FRM and FEM SLAMS monitors at PAMS sites. These audits are discussed above under 'National Performance Audit Program (NPAP).'

Air Toxics Monitoring

For FY 2009, the President's request again includes resources for the support of national air toxics monitoring and characterization activities. Funds are awarded under Section 105 authority to continue support for ongoing air toxics monitoring activities initiated and conducted by state and local air quality agencies. In addition the Agency is proposing a total of $9.8 million under 100% federally-funded §103 authority for: (1) operation and maintenance of the multi-year National Air Toxics Trends Stations (NATTS), and (2) two-year community-scale air toxics monitoring projects (see Table A-6). Included in the NATTS program total are three supplemental program components: quality assurance, methods development, and an analysis initiative using all available ambient air quality data for toxics with special emphasis on observations from the NATTS and community-scale monitoring programs. These three components are associated program support for all grants that support air toxics monitoring or management activities. EPA will again use section 103 authority for the NATTS related activities and the community-scale air toxics monitoring projects. FY 2009 will be the seventh overall year of NATTS data collection, the fifth complete year of NATTS data collection, and the fourth community-scale grant cycle in six years. The desired program objectives are:

- Establish trends and evaluate the effectiveness of air toxics emissions reduction strategies.
- Characterize the local-scale ambient concentrations that result when air toxics originating from local sources concentrate in relatively small geographical areas, producing the greatest risks to human health.
- Provide data to support, evaluate, and improve emission inventories and air quality models used to develop emission control strategies, perform exposure assessments, and assess program effectiveness.
- Provide data to support scientific studies to better understand the relationship between ambient air toxics concentrations, human exposure, and health effects from these exposures.

EPA's FY 2008 operating plan proposed approximately $4.2 million in STAG funds under §103 to fund operation of the National Air Toxics Trends Station (NATTS) Network during the period July 1, 2008 – June 30, 2009. About $0.7 million would be used for quality assurance, data analysis, and methods and instrumentation associated with the NATTS program. The balance of §103 funds targeted for air toxics monitoring would be used to fund the competitively selected community-scale air toxics monitoring projects arising from the 2007 grant competition.

The FY 2009 allocation categories and amounts are provided in Table A-6. The funding allocation for operation of NATTS sites will be sub-allocated to the Regions with states hosting those sites. The split of funding among the other listed line items may be adjusted prior to the start of FY 2009 based on consultations with state and local air agency representatives. Funds for other line items listed are anticipated to be used in nationally administered support contracts or competitively awarded to eligible recipients for specific activities.

The NATTS program component will continue to build on the established quality assurance and methods protocols. Laboratory and field staff continues to work with EPA to ascertain the optimum methods for capturing and analyzing core pollutants associated with risk, develop performance based quality indicators to prove valid data results that will contribute to our understanding of risks, and stabilize the measurements for all NATTS sites so that comparisons across the nation can be made. In 2007, improved methods for hexavalent chromium and acrolein were implemented by all NATTS grantees (method documentation available at: http://www.epa.gov/ttn/amtic/airtox.html). Note that though these sampling and analysis methods are considered the best currently available, efforts to further improve them are anticipated to continue through at least 2009. Also, in 2009 methods development work may include how to best measure coarse particles ($PM_{10-2.5}$) for HAP metals and other speciation components to complement the existing measurement of metals in PM_{10} at NATTS. The analytical community will continue to assess trends in air toxics concentration levels, relate those data to associated risk levels, and explore relationships between these ambient and risk levels to emission sources and changes in these levels to emission reduction efforts.

Also during FY2008, new NATTS were established at Portland OR, Sacramento CA, and Richmond VA bringing the total number of NATTS to twenty eight (no additional sites are anticipated). These sites were selected based upon criteria vetted through the NACAA Monitoring Steering Committee; foremost among these criteria was stationary source risk as identified by the EPA's National Air Toxics Assessment (NATA). Based upon successful pilot

efforts at four NATTS during 2007, sampling and analysis for polycyclic aromatic hydrocarbons (PAHs) by Method TO-13A / ASTM D 6209 was implemented at all NATTS during 2008. Note that the impetus for including PAH measurements was the fact that PAHs have consistently been identified by NATA as national cancer risk drivers. Most notably among this class of pollutants is naphthalene, the average ambient concentration for which exceeds the 10^{-6} cancer risk, in some cases by factors ranging from one to two orders of magnitude, at every site at which it's monitored across the US (and with a method only producing 60-70% recovery for this particular pollutant). Finally, the project period for each NATTS was changed from calendar year to July 1 through June 30, aligned with most State and local agency fiscal years.

Table A-6. Proposed FY 2009 Funding for National Air Toxics Trends and Community-Scale Monitoring

$4,310,320	Operation and maintenance of existing and new NATTS sites.
$320,000	NATTS Quality Assurance: includes periodic Proficiency Testing, targeted Technical Systems Audits, and annual data quality assessment via centrally (OAQPS) managed contracts.
$300,000	Data Analysis: delineate and assess trends, data and network assessment to include exploration / demonstration of monitoring data utility in providing local scale findings that are useful in S/L/T air quality program management, and Annual Data Analysis Workshop for EPA and S/L/T's to share results; synthesize into annual report.
$180,000	Methods and Instrumentation: support for improved air toxics monitoring methodology, especially for priority HAPs for which methods either do not exist, or existing methods have been deemed insufficient to meet end user needs; acquire new, upgrade, or replacement sampling or analytical equipment on a limited, case-by-case, as needed basis in direct support of NATTS.
$4,742,556	Community-scale monitoring projects: grants (two year intended duration) designed to assist State, local, and Tribal communities conduct monitoring campaigns and/or data analyses to characterize their local air toxics problems and their causes, and/or track their air toxics reductions efforts.
$9,852,876	Total Funding

The community-scale projects, identified and selected through competition, are intended to better characterize air toxics problems at the local level and to address those problems through local actions which complement national regulatory requirements. Such monitoring has the potential to elucidate the scope of local air toxic problems, measure what reductions have been achieved through actions taken, and provide information needed for local policy development on reducing emissions from particular sources. New for the FY 2009 funded solicitation will be an increased emphasis on multi-pollutant studies aimed at gathering detailed information across a broad range of hazardous and criteria air pollutants.

While aimed at meeting local data needs, EPA expects that data, results, and findings from all community-scale projects will also be valuable to other areas and to the national air toxics programs. Hence, a portion of the air toxics STAG funds are used to organize, summarize, and analyze the air toxics data from the community-scale studies and the NATTS sites (and data from other monitoring efforts) and to communicate the findings to all states involved in air toxics management. This includes a data analysis workshop.

Further information regarding the community-scale air toxics monitoring projects, to include previous solicitations, successful project proposals, and final reports, may be found at: http://www.epa.gov/air/grants_funding.html. For more information contact Michael Jones in OAQPS' Ambient Air Monitoring Group at 1-919-541-0528, or jones.mike@epa.gov.

IMPROVE Visibility Monitoring Network

The IMPROVE monitoring program supports the national goal of reducing haze to near natural levels in National Parks and wilderness areas. IMPROVE monitoring sites collect data on visibility, including optical, photographic, and speciated particulate data, though EPA resources are only used for the particle speciation monitoring. EPA works with the Regional Planning Organizations (RPOs) to help states prepare their SIPs for regional haze rule (these were due 12/07). Data from IMPROVE sites are needed to meet the regional haze rule requirements of states for monitoring Class I area long-term trends through and beyond the 10-year SIP period (2008 to 2018), as well as being useful in the required periodic assessments of progress towards the national visibility goal. States also use data from the IMPROVE network to characterize upwind and background PM_{10} and $PM_{2.5}$ conditions and to assess source attribution for the $PM_{2.5}$ and PM_{10} NAAQS in nonattainment areas.

The IMPROVE network was started in 1987 as part of a federally-promulgated visibility plan and operated by the Department of the Interior (DOI) under the direction of a multi-agency federal/state steering committee. EPA expanded the original network in FY 1999 and FY 2000 from approximately 30 sites to 110 sites. The expanded network covers all of the CAA Class I areas where visibility is important (except the Bering Sea area which is impractical to monitor). EPA provides state/local air quality management STAG funds to the DOI to help maintain the IMPROVE network because of the importance of IMPROVE data to development of SIPs for both regional visibility and PM NAAQS attainment. The DOI and the other participant organizations contribute in excess of $3 million of their own funds or in-kind resources per year to support field operations and other monitoring at IMPROVE sites.

For reasons of convenience and/or consistency of data, a number of state, local, and tribal monitoring organizations have historically chosen to ask the IMPROVE program to provide field technical support and laboratory services for additional sampling stations at locations under their control, using the IMPROVE protocols for sampler design, sampler operation, and laboratory analysis. Data from these additional "state/local IMPROVE protocol sites" (currently about 60) are managed and made public along with the data from the 110 sites in protected class I areas. These additional sites are provided as associated program support. This arrangement will continue in FY2009. In addition, some federal agencies provide full funding for additional IMPROVE protocol sites to meet various program or research objectives.

Tribal, State, local, and federal monitoring organizations may continue, discontinue, or add sites for the monitoring period which runs from July 1, 2009 through June 30, 2010. Once a monitoring organization has identified its source of funds for such sites, it may contact Marc Pitchford (see below) to request monitoring support services and to begin arranging for the necessary funds transfer. Requests should be made as early in calendar year 2009 as possible, but no later than April 30, 2009. Tables A-3 and A-4 are based on a placeholder assumption that monitoring organizations will retain all current state/local IMPROVE protocol sites in 2009.

After extensive testing to ensure data comparability, the IMPROVE steering committee approved a change in carbon analysis methodology (both analyzer and protocol) to replace their 18-year old analyzer systems with new system for all samples collected starting in 2005. The IMPROVE steering committee also mandated the development and approved for use a revised algorithm for estimating light extinction from IMPROVE PM speciation data, that is expected to be used by most (perhaps all) states in their Regional Haze Rule SIPs. A revised (incorporating the latest data flags and edits) IMPROVE dataset required by the Regional Haze Rule for the 5-year baseline period (2000 to 2004) was disseminated through the IMPROVE and VIEWS. The Visibility Information Exchange Web System (VIEWS) is a database system and set of online tools originally designed to support the Regional Haze Rule. VIEWS provides easy online access to a wide variety of air quality data and provides online tools for exploring and analyzing these data. It also is used to facilitate the research and understanding of global air quality issues.

For FY 2008, about $2.6 million of $PM_{2.5}$ monitoring funds appropriated under §103 authority and about $1.2 million of state/local STAG funds appropriated under §105 authority were proposed to be targeted to support visibility monitoring at 110 IMPROVE sites and 7 sites collocated with CASTNET. For more information on any aspect of the IMPROVE program, contact Marc Pitchford at 702-862-5432.

Planning Information for Ambient Monitoring on Tribal Lands

EPA respects each tribe's sovereign ability to identify its air quality goals and to make monitoring decisions it deems appropriate for its needs. This section addresses issues for consideration when conducting ambient air quality monitoring in the particular context of an EPA grant work plan. There are no Clean Air Act requirements for ambient monitoring on tribal lands, so tribes have flexibility in customizing ambient monitoring to address the many different situations they face in terms of air quality and other environmental concerns. Whatever the local situation, the purpose of any ambient monitoring should be to inform the tribal public about the quality of the air where that quality is in doubt, to assist the tribe in managing its air quality, to help the tribe make the case that other governments or private parties need to control emissions due to their effect on air quality on tribal land, and/or to help track the effects of control actions to verify that they have addressed a problem.

For some tribes ambient monitoring may or may not be a priority for funding compared to other air quality program or environmental program activities. If monitoring is conducted, a tribe's interests can be best served when the type of monitoring is appropriate for the specific situation. For a given tribe, some types of monitoring may be useful, while others may not be relevant. With limited resources available, strategic planning based on thoughtful priorities is needed. The EPA Regional Offices will be the principal EPA partners with tribes in this case-by-case planning.

In 2007 and 2008, EPA has emphasized that data from EPA-funded monitors on tribal lands should be available to both EPA and the general public through the AQS or other relevant national data system, once start-up issues are worked out and the data are reliable. In 2008, EPA continued to identify several workable alternatives for data preparation and submission. In awarding grants to tribes with FY 2009 funds, Regional Offices are expected to make sure that tribes will have a way to get data submitted, including QA-related data.

EPA has developed a National Ambient Air Monitoring Strategy that re-examines how the national ambient monitoring programs can be more thoughtfully directed towards their multiple purposes (http://www.epa.gov/ttn/amtic/monstratdoc.html). For the most part, this strategy addresses situations and considerations relevant to states, rather than the special situations and considerations relevant to tribes. In FY2008, EPA developed a document titled: *Technical Guidance for the Development of Tribal Air Monitoring Programs* (http://www.epa.gov/ttn/oarpg/t1/memoranda/techguidancetribalattch.pdf) with the intent of providing tribes a better understanding of the ambient air monitoring process and to provide information on resources and tools to help build and sustain and air quality monitoring program. For 2009 and beyond, EPA may provide additional guidance specifically related to tribal air monitoring. Any new guidance will continue to provide flexibility for tribes and Regional Offices to address the many different air quality situations on tribal lands on a case-by-case prioritized basis. See: http://www.epa.gov/oar/tribal/tam.html for information on the progress in developing new guidance for tribal monitoring.

Technical assistance in conducting ambient monitoring is provided to tribes through the Tribal Air Monitoring Support (TAMS) Center (http://www4.nau.edu/tams/). TAMS staff can provide more specific information on any of the types of monitoring described here.

The remainder of this section provides general information that may assist tribes in clarifying their objectives for ambient monitoring and getting started on planning monitoring to meet those objectives.

Air Toxics Monitoring: This may be the type of ambient monitoring of most interest to many tribes, because local sources potentially subject to tribal management can dominate exposures and because public perceptions of air toxic risks can be strong. As with all monitoring, the purpose of monitoring air toxics is to identify problems that merit action, plan what action will be effective, and track the effects of the action to verify it has addressed the problem. Of the 188 officially listed air toxic compounds under the Clean Air Act, a subset of 18 are currently routinely monitored at EPA-funded non-tribal sites.[13] In 2008 there is a potential that the list will be expanded to cover a number of Polycyclic Aromatic Hydrocarbons (PAHs). Tribal monitoring likely should not aim beyond this list or its revision without specific local reasons, and should not necessarily attempt to measure all of these. While many other compounds will be collected on the same filter or cartridge, or in the same canister, there is extra cost at the laboratory for each compound that is measured and reported. Some of the compounds on this list, for example carbon tetrachloride, are not emitted (or not supposed to be emitted) from any current source and/or have about the same concentration everywhere in the U.S. so there is little to be gained from measuring them on any particular reservation.

For many air toxics (excepting some gases), samples need to be collected in the field (or indoors) and shipped to specialized laboratories for analysis. EPA has contracts with qualified labs which make it relatively easy to have this done.

[13] These monitored compounds are: benzene, carbon tetrachloride, chloroform, 1,3-butadiene, 1,2-dichloropropane, methylene chloride, tetrachloroethylene, trichloroethylene, vinyl chloride, arsenic and compounds, beryllium and compounds, cadmium and compounds, Hexavalent chromium, lead and compounds, manganese and compounds, nickel and compounds, acetaldehyde, formaldehyde, and acrolein.

Interpreting air toxics monitoring data is not a simple task, since there are no bright legal lines between "acceptable" and "unacceptable" air quality, as there are for NAAQS pollutants. Interpretation can be more difficult or impossible if the monitoring location or the monitoring schedule is not appropriate for estimating risk to residents. Each Regional Office has specialists in risk assessment that can assist tribes in planning air toxics monitoring so that it is useful.

See http://www.epa.gov/air/tribal/airtoxics.html for more information on air toxics from a tribal perspective. See http://www.epa.gov/ttn/amtic/airtoxpg.html for information on monitoring of air toxics. See http://www.epa.gov/ttn/atw/nata for the 1999 National Scale National Air Toxics Assessment website; the information and links on this website may be useful background when considering whether and what air toxics to monitor on a reservation, even if no 1999 assessment was possible for that reservation due to lack of an emissions inventory.

Monitoring for NAAQS Pollutants using Federal Reference Methods (FRM) or Federal Equivalent Methods (FEM): This type of monitoring is primarily useful for determining on a formal basis whether air quality in a given location meets or does not meet a national ambient air quality standard (NAAQS), for example ozone, $PM_{2.5}$, PM_{10}, CO, SO_2, NO_2 or lead. It takes three years of data collection to make this determination for most NAAQS of interest. Establishing attainment status via FRM/FEM monitoring data can be important as it can affect the legal requirements that apply to sources at and around that location. It can also affect whether a tribe can pursue action to seek emission reductions from upwind sources beyond the tribal boundary.

Monitoring for certain NAAQS pollutants may indicate a need to reduce emissions within the tribal boundary in order to protect public health of the residents, but in many cases it will be obvious from an understanding of emission-generating activities that local sources do not cause or contribute to concentrations near or above the NAAQS. Judging from experiences in many non-tribal situations around the country, CO nonattainment is very unlikely on reservations, even where traffic is attracted by entertainment centers. Ozone nonattainment if it exists is most likely due to upwind off-reservation sources. PM_{10} and $PM_{2.5}$ sources on reservations (wood burning, fires, road and agricultural dust, etc.) could be a problem by themselves or on top of concentrations coming from upwind areas. Lead concentrations are very unlikely to approach the NAAQS unless there is uncontrolled smelting/recycling of car batteries.

Before beginning this type of monitoring, the Regional Office and tribe should consider: (1) whether attainment status can be determined with reasonable confidence in other ways (including passive monitors and other methods that do not qualify as Federal Reference methods but can be sufficient for unofficially showing that concentrations are well below the NAAQS), (2) how information on the attainment/nonattainment status once available could affect management of the tribal air program, and (3) how long the monitoring should continue if it does or does not show a NAAQS violation.

The EPA Regional Offices should work with the tribes to review the status and continued utility of any FRM monitors which have been operating long enough to have to have reasonably complete data for at least 3 to 5 years. If attainment with a comfortable margin has been found and if there is no on-reservation or nearby development that is likely to change the situation substantially, it may be good to discontinue this type of monitoring in favor of other environmental management efforts.

On October 17, 2006, EPA promulgated a rule which lowered the 24-hour $PM_{2.5}$ NAAQS from 65 to 35 micrograms per cubic meter. This change should be considered when planning tribal monitoring, because the more stringent standard is more likely to be violated as a result of local sources such as seasonal wood burning, wild fires, and prescribed burning than is the annual $PM_{2.5}$ NAAQS. EPA also revoked the annual PM_{10} NAAQS everywhere (not the 24 hour PM_{10} NAAQS). This change is expected to have no impact on tribes, as the annual standard was rarely violated anyway.

Continuous $PM_{2.5}$ Monitoring – There are several types and brands of monitors that provide estimates of $PM_{2.5}$ concentrations on a continuous basis, without need for filters to be sent to a laboratory for weighing. These are both less expensive to operate than a filter-based monitor and can give information on air quality that tribal officials and the public can use in real time to manage emission sources and personal activities. Where official status as attainment or nonattainment is not an important issue, this type of monitor may better serve tribal needs. For example, this type of monitoring may be useful in burn management programs. Improved continuous $PM_{2.5}$ monitors with official status as Federal Equivalent Methods may become available in the next couple of years.

Passive Monitoring and Other Types of Screening Monitoring: A passive monitor is one which "soaks up" pollution rather than actively collecting it on a filter or pumping it through an on-site measurement device. This means they can be used where there is no electricity supply. Also, the monitoring unit is usually inexpensive, so it is possible to place them more closely together or over a much larger area than conventional powered monitors could possibly be placed. Passive monitors are not suitable for formal designation of an area as attainment or nonattainment but they can help a tribe understand the air quality situation on its reservation, for example, what part of a reservation has the worst air quality and whether any part has concentrations that approach health benchmarks. There are passive monitors available for a number of pollutants including several volatile organic air toxics including benzene, ozone, CO, and SO_2. Time periods for exposing the monitor to the ambient (or indoor) air vary. The monitors must be collected each sampling period and sent to a laboratory for chemical analysis, so costs are not insignificant. Passive monitoring programs are usually of short duration because of the field labor and laboratory costs, compared to automated continuous analyzers. They have the advantage of requiring little up-front investment, however. EPA Region 6 has been in the forefront of applying passive monitoring to a variety of situations on and off reservations. See http://www.epa.gov/ttn/amtic/passive.html for more information.

Photochemical Assessment Monitoring: This is a very specialized type of monitoring related to the ozone NAAQS, in which air samples collected in the morning are taken to a laboratory for measurement of the concentrations of many individual hydrocarbon species including some toxic gases. This monitoring is only done during the ozone season. The purpose is to help identify the chemicals and sources contributing to ozone and the most efficient controls for reducing ozone concentrations. It is unlikely that this type of monitoring meets any distinct tribal need. See http://www.epa.gov/ttn/amtic/pamsmain.html for more information.

$PM_{2.5}$ Speciation Monitoring: This is a very specialized and expensive type of monitoring related to the $PM_{2.5}$ NAAQS, in which filters collected over a 24-hour period are shipped by overnight express to a laboratory for measurement of various components of $PM_{2.5}$ such as sulfate, nitrate, elemental carbon, organic carbon, and individual metals. This type of monitoring is done every third or every sixth day, year round. The purpose is to help identify the direct and

precursor pollutants and sources contributing to $PM_{2.5}$ and the most efficient controls for reducing $PM_{2.5}$ concentrations. Most STN sites are in urban areas. This type of monitoring may meet a tribal need, if a $PM_{2.5}$ nonattainment (or near nonattainment) situation is confirmed through simpler monitoring and its causes are not apparent, if high numbers of diesel engines operate in or upwind of the reservation, or if sources of toxics metals in $PM_{2.5}$ form are known or suspected to be a health risk. However, if metals are a concern, it may be more appropriate to sample for metals in PM_{10} form in order to capture all the PM that enters the human thorax and may affect health. Most air toxics monitoring programs sampling for toxic metals do so in PM10 form. See http://www.epa.gov/ttn/amtic/speciepg.html for more information.

IMPROVE Protocol Monitoring: IMPROVE stands for Interagency Monitoring of Protected Visual Environments. The IMPROVE program is described elsewhere in this Appendix. See http://vista.cira.colostate.edu/improve/ for more information. Each site has several monitors, all aimed at collecting information to understand what pollutants and sources contribute to haze and to track changes in visibility over many years. Among these monitors are a PM10 sampler and samplers to provide speciation details for $PM_{2.5}$. These data allow calculation of an index of visibility. The IMPROVE program can be convenient for the monitoring organization providing the site, because the IMPROVE program contractors provide equipment installation, training, periodic field support, laboratory analysis, and data management and publication.

Over the last several years, about 10 tribes have applied for and received grant assistance from their EPA Regional Office to allow them to request the IMPROVE program to establish and provide technical services for an IMPROVE protocol sampling station on tribal land. Some tribal sites have operated for a period and then been discontinued. The grant funds needed to pay for this are awarded to the tribe by the EPA Regional Office, but transferred to the IMPROVE program through OAQPS. Tribal monitoring organizations may ask for FY 2007 funding from their EPA Regional Office to continue, discontinue, or add sites for the monitoring period which runs from July 1, 2007 through June 30, 2008. FY 2008 funding would be used for the July 1, 2008 through June 30, 2009 period. Once a tribal monitoring organization has been awarded funds for such sites, the tribe and/or the Regional Office may contact Marc Pitchford at 702-895-0432 to request monitoring support services and to begin arranging for the necessary funds transfer. Requests should be made as early in calendar year 2007 as possible, but no later than March 31 in order to start or continue monitoring on July 1.

In some cases in the past, a Regional Planning Organization or other multi-state organization has funded a tribe's operation of an IMPROVE protocol site because of its advantageous location. In the future, EPA plans on streamlining this process by talking to the Regions and Tribes at the early stages of the planning process so IMPROVE funds for tribal sites (that decide to operate for the next fiscal year) can be forwarded directly to OAQPS without being distributed to the Regions and then being transferred to OAQPS. This should save time and provide for greater efficiencies.

IMPROVE protocol monitoring is the generally accepted approach to quantifying visibility, and is the right approach if a tribe has a need for such quantification. EPA Regional Office staff can assist a tribe in understanding how such data could be used for official and unofficial purposes. Because the protocol quantifies carbonaceous material in $PM_{2.5}$, IMPROVE protocol sampling may also be of interest if high numbers of diesel engines operate in or upwind of the reservation. IMPROVE monitors are not Federal Reference/Equivalent monitors, however, and cannot be used for designation purposes or to officially trigger a requirement for off-reservation

sources to reduce their adverse impact on attainment within a reservation or other tribal land area.

CASTNET Monitoring: CASTNET is a long-term monitoring network of more than 80 sites located primarily in rural areas. This network is designed to measure status and trends in deposition of particles, ozone, and other pollution emitted from facilities with tall stacks (generally power plants), mixed in the atmosphere, and transported over long distances. Ambient monitoring at CASTNET sites is supposed to reflect the overall effect of emissions from many sources, rather than any individual plant. While there is likely to be no direct use of such monitoring data in a tribe's own air quality program, a tribe may wish to host a CASTNET site in order to help advance the national air quality program. Tribes presently operate three sites. CASTNET is seeking to expand the number of sites in the western U.S. CASTNET sites are supposed to remain in operation for a long time. See: http://www.epa.gov/castnet for further information.

National Atmospheric Deposition Program: The NADP program is run by the U.S. Geological Survey, and collects data on the chemistry of precipitation. NADP wet deposition sites are usually located such that there are no dominant nearby sources, which means that a site may not be of direct use of such monitoring data in a tribe's own air quality control program for sources on tribal land. However, a tribe may wish to host a NADP site in order to understand its air and water quality as impacted by near and distant sources, and/or to help advance the national air quality and water quality programs. A number of tribes currently are partners in this program and have sampling sites on their lands. See http://nadp.sws.uiuc.edu/ for more information.

Mercury Monitoring: The NADP and several federal agencies including EPA are collaborating on a technical framework for a nationally coordinated network of speciated ambient mercury monitoring stations including both gas and particulate forms of mercury. Data of this sort eventually will be useful for calculating dry deposition and possibly for identifying the emission sources of mercury. Once technical, administrative, and data handling procedures are developed, tribes may wish to join this network. Tribes may also wish to participate in this development. It is anticipated that a high level of on-site expertise will be needed to successfully operate a mercury monitoring stations, even with centralized technical and QA support. At this time, no new source of funding exists to support tribal mercury monitoring sites. More information is available at http://nadp.sws.uiuc.edu/mtn/ .

Smoke Monitoring: Tribes who use controlled or prescribed burning to manage forest or range land, or whose populations are frequently affected by fires may be interested in monitoring smoke concentrations either to help make decisions on when it is safe to burn, or to advise residents of when to take action to avoid smoke exposure. There are no formal procedures or standard techniques for such monitoring at this time, but portable monitors and satellite data communication devices have been tested and found to be practical by EPA and several governmental partners.

NCore Multi-pollutant Monitoring: The NCore multi-pollutant monitoring network is a concept that will be turned into reality over the next few years. The plan is to have a network of about 75 sites which simultaneously measure a variety of gas and particle pollutants, using continuous methods to follow changes during a single day, across the seasons, and over many years. Most of these sites will be in urban areas and will be operated by state or local governments. However, about 20 sites need to be in rural areas. While there is likely to be a

direct use for only some of the monitoring data collected at an NCore station in a tribe's own air quality program, a tribe may wish to host a rural site in order to understand its air quality and to help advance the national air quality program. EPA OAQPS and Regional Offices will be planning the location of sites over the next couple of years, and Regional Office staff will contact a tribe if there appears to be an advantage in placing a site on a reservation. EPA has not yet identified exactly how a rural site on tribal land would be funded, given that the benefit of the data from such a tribal site would accrue to many other parties. EPA will be exploring this question with tribal and state/local officials over the next year or two. These sites are supposed to operate for many years without being moved, once initiated. See http://www.epa.gov/ttn/amtic/ncore/index.html for more information.

Program Support for Monitoring (National/Regional Monitoring Procurement Contracts)

EPA makes procurement services available to state and local agencies, via national or regional contracts or interagency agreements, for a variety of support services and materials. These services can be conducted as either associated program support or as in-kind assistance. In providing associated program support, EPA works with Regions, tribes, and state and local agencies in advance to identify needs on a national basis and targets funds for the support *before* determining the final Region-by-Region allocation of grant funds (i.e., pre-allotment). In contrast, in-kind assistance is agency-specific and the value of the service is included in the grant agreement of a state, tribe, or local agency *after* final agency-by-agency allotments are determined. This approach requires the recipient provide an appropriate amount of matching funds and meet other grant administrative obligations relative to the in-kind assistance. This occurs when contract support is requested by a grant recipient after its grant is awarded. Most support to monitoring programs is provided as associated program support, with the in-kind support being used to increase the level of support above planned levels if unexpected needs arise.

Traditionally, OAQPS works with Regions to determine the level of funds that each state or Tribe wants to allocate for the national procurement contracts. The services offered in past years included assistance in monitoring site set-up and laboratory sample analysis for nonmethane organic compounds, urban air toxics, carbonyls, PAMS, and hazardous air pollutants; performance evaluation (PE) sample support for agencies participating in NATTS; filters for PM_{10} and Pb in the form of total suspended particulates; $PM_{2.5}$ filters; laboratory services for $PM_{2.5}$ speciation; IMPROVE monitoring services; and independent audits under the NPAP and PEP programs. Audits are usually provided via contracts managed by Regional Offices. Other services and materials are provided via contracts or interagency agreements managed by OAQPS.

A new opportunity EPA wishes to make available to monitoring organizations is to obtain NADP technical support for speciated ambient mercury monitoring stations via EPA's interagency agreement with the U.S. Geological Survey, as associated program support or in-kind service. Organizations interested in this should contact Gary Lear of the Clean Air Markets Division (lear.gary@epa.gov).

Table A-7 lists categories and funding amounts for associated program support not previously identified under specific monitoring topics: site support and laboratory analysis for air toxics and PAMS monitoring and filters for PM_{10}. Typically final amounts to be set aside on a

pre-allotment basis for the forthcoming fiscal year are identified after EPA and States conclude their grant negotiations in the preceding spring and summer. The amounts shown in Table A-7 are current best estimates. Final FY 2009 amounts will be based upon confirmed needs received from the Regions and their State and local agencies by early in FY 2009.

Table A-7. Preliminary FY 2009 National Procurement Contract Amounts
(For Certain Categories of Associated Program Support)

	1	2	3	4	5	6	7	8	9	10	Total
Estimated FY 2008 Cost											
S/NMOC Sampling Sites (O3)	0	0	0	0		0	0	0	0	0	0
UATMP Sites (Air Tox)	0	170,404	0	0	49,303	0	0	0	0	0	219,707
PAMS Q/A Support (O3)	9,990	0	14,555	0	64,480	2,427	0	0	0	0	91,451
Carbonyl Monitoring (O3)	0	50,040	0	0		0	0	0	0	0	50,040
HAP Support (Air Tox)	0	0	0	0		0	0	0	0	0	0
All PM10 and Pb Filters	6,366	0	37,807	0		18,831	24,890	17,621	54,191	5,345	165,051
Total	16,356	220,444	52,362	0	113,783	21,258	24,890	17,621	54,191	5,345	526,250

(These STAG amounts are considered to be initial placeholders for FY 2009. The final level will depend upon a more definite indication of needs from recipients and will be adjusted accordingly. Adjustments will necessarily cause changes in the level of direct grant awards. Residual funds are always returned to Regional Offices for use in direct awards to recipients.)

In general, funding that would otherwise go to specific agencies in the form of a direct award at the Regional Office level can be identified in advance for associated program support. In essence this reduces the direct award level to that agency. If associated program support costs identified for a specific agency are not used or are less than anticipated then these resources would ostensibly be returned to that agency's allotment. However, for some associated program support common to all recipients, there is a fixed EPA cost which does not depend on the number of individual recipients. An example would be the PEP or NPAP programs for auditing monitoring stations, which have fixed costs to pay contractors to maintain measurement standards and keep standard operating procedures current. There may also be variable costs for the contractor labor and supplies to make monitoring station visits. For audits, therefore, changes in the number of audits within a Region will result in a refund of only the variable portion of the cost of the station visits (i.e., the associated program support).

Another exception is that EPA considers the IMPROVE sites representing the Class I visibility protection areas to have benefits for all state air grant recipients because of interstate transport impacts and the responsibility of each state to protect visibility in every Class I area it impacts. Individual states (or Regions) therefore cannot "unorder" these monitoring sites and receive back their operating costs. In contrast, the cost of supporting state/local IMPROVE protocol sites is "refundable" to a Regional Office.

Centralized Site Support and Laboratory Analytical Services - The EPA will continue coordinating centralized laboratory analytical services to support air toxics, organic compound, and PAMS programs in FY 2009 with those regional, state, and local agencies wishing to participate. Examples of services available via this national contract include those listed below.

Speciated and Total Nonmethane Organic Compound Program (SNMOC/NMOC): The SNMOC/NMOC program has been operating since 1984. The EPA continues to support a centralized program for assistance to state and local agencies in the collection of NMOC, SNMOC, selected toxic compounds, and carbonyl compounds. This program was initiated to provide data for use in development of control strategies for ozone. As part of the SNMOC /NMOC program, participating sites are provided with all necessary sampling equipment, which they may co-locate with NO_x monitors. The SNMOC/NMOC program consists of the following base components:

- Base Site support for sampling equipment preparation, installation and training, problem solving, and final reporting; and
- Canister sample analysis for 78 speciated NMOC or total NMOC.

Options include:

- Analysis for 60 toxic and polar compounds;
- Cartridge sample analysis for 15 carbonyl compounds; and
- Concurrent analysis for both toxic and polar compounds and speciated NMOC at a cost that is significantly reduced compared to performing the two analyses separately.

States collect the samples in canisters and/or cartridges and air freight them to Research Triangle Park, NC, for analysis. The samples are collected each week day from 6:00 to 9:00a.m. during the summer (typically June 1-September 30). In general, 96 samples are collected at each site over the study period. However, additional samples may be purchased.

Urban Air Toxics Monitoring: To support emerging needs for information on levels of organic toxic species in ambient air, OAQPS initiated the Urban Air Toxics Monitoring Program (UATMP) in 1988. This program serves as an analytical/technical support program similar to the SNMOC/NMOC program. The major purpose of this program is to support state and local agency efforts to assess the nature and magnitude of various air toxics problems via collection of 24-hour integrated ambient air samples at six or twelve day sampling intervals, sample analysis in a central laboratory, data reporting to EPA's Air Quality System, and site-specific data analyses. This program continues to be highly successful, with excellent overall data capture and data quality that meets well-designed program goals. The UATMP consists of the following base components:

- Base site support for sampling equipment preparation, installation and training, problem solving, and final reporting;
- Canister sample analysis for 60 toxic and polar compounds; and
- Cartridge sample analysis for 15 carbonyl compounds.

Options include:

- Canister sample analysis for 78 speciated NMOC; and
- Concurrent analysis for both toxic and polar compounds and speciated NMOC at a cost that is significantly reduced compared to performing the two analyses separately.

Carbonyl Monitoring: Carbonyl sampling and analysis has been part of the monitoring support options that the Agency has provided since 1990. While carbonyl monitoring support can still be performed simultaneously with other program elements, the independent carbonyl option provides more flexibility for special studies and saturation monitoring programs. The Carbonyl Monitoring Program support consists of the following base components:

- Base site support for sampling equipment preparation, installation and training, problem solving, and final reporting; and
- Cartridge sample analysis for 15 carbonyl compounds.

PAMS and Toxics: PAMS support items will be available to include technical off-site and on-site support (initial equipment set-up, on-site technical assistance, consultation, problem solving, etc.); quality control (QC); and quality assurance (QA) program support (data validation, standards acquisition, and data management support). VOC canister, carbonyl compounds sample and concurrent toxics and speciated hydrocarbon analysis are also available.

The PAMS and toxics technical support program consists of the following base components:

- Technical site support;
- QA/QC support;
- Canister analysis support for PAMS compounds;
- Cartridge sample analysis for 15 carbonyl compounds; and
- Concurrent analysis for both toxic and polar compounds and speciated NMOC at a cost that is significantly reduced compared to performing the two analyses separately.

The PAMS automated analysis systems and/or multiple canister collection system purchase and installation are the responsibility of the participant. The amount of support an agency can order for the PAMS technical site support and QA/QC components of the program have been divided into smaller increments so that state, and local agencies can order the exact amount of support they require.

Other Hazardous Air Pollutant Analysis: The national monitoring support programs have been expanded to provide for the measurement of additional HAPs to support the effective implementation of the CAA and address the needs of other special studies. Analytical services support is provided for samples containing specific HAPs, which are a subset of the 188 compounds listed in the CAA. Participants are responsible for providing all necessary sampling equipment. The analysis among categories is based upon the specific needs of the state or local agency. This support also will assist the states in implementing the new national ambient monitoring network. Some of the available options under this category include:

- Canister sample analysis for 60 toxic and polar compounds;
- Cartridge sample analysis for 15 carbonyl compounds;
- Metals, hexavalent chromium, semivolatiles, PAHs, dioxin, etc.

Air Toxics Performance Evaluation Sample Support: Agencies that are participating in the NATTS can receive PE samples on an annual basis. These can include VOCs, Carbonyls, SVOCs and metals on quartz filters. The PE samples shall be generated and analyzed by the national contractor and sent as “blind” samples to the participating agency. If an agency uses the

national contractor for analysis, the agency will not be able to use the contractor for PE sample support.

For more information on Centralized Site Support and Laboratory Analytical Services, contact Margaret Dougherty at 919-541-2344 (dougherty.margaret@epa.gov) or Michael Jones at 919-541-0528 (jones.mike@epa.gov).

Particulate Matter Filters - OAQPS has historically purchased particulate matter filters (for PM_{10} monitoring, total suspended particulate sampling used for Pb and other metals monitoring and $PM_{2.5}$ monitoring) through national contracts and distributed these to state and local agencies across the nation. The economies of scale from this type of centralized purchasing, centralized acceptance testing, and distribution of filters has produced lower costs than if state and local agencies each purchased these filters through their individual agencies. State and local agencies are responsible for providing information to the Regions each year on the numbers and types of filters required prior to shipment. For PM_{10} filters, monitoring agencies will need to specify whether the filters requested are to be used to support high-volume samplers (i.e., 8 in X 10 in quartz filters) or low-volume samplers (i.e., 46.2 mm Teflon filters).

For information on filter purchases, contact David Lutz at 919-541-5476 (lutz.david@epa.gov).

Section V. PRELIMINARY ALLOCATION OF SECTION 105 AIR GRANTS [Reserved]

[A preliminary allocation for Section 105 air grants has not yet been developed pending additional consultation with stakeholders.]

Section VI. STATE INDOOR RADON PROGRAM

The State Indoor Radon Grant (SIRG) Program distributes grants authorized under section 306 and 10(a) of TSCA. The SIRG program's objectives are outlined in EPA's *State and Tribal Indoor Radon Grants Program Guidance and Handbook* located at: http://www.epa.gov/radon/pdfs/guidance_and_handbook.pdf . See also: http://www.epa.gov/radon/sirgprogram.html .

Recipients of FY 2009 SIRG funds should emphasize radon risk reduction through increased action by consumers, homeowners, real estate professionals, homebuilders, and state-local governments. Funded projects should clearly result in the following outcomes:

- Building homes with radon-resistant new construction;
- Reducing radon in existing homes;
- Reducing radon in existing schools and building new schools with radon-reducing features; and
- Other projects and activities that clearly contribute to achieving the three preceding outcomes.

In 2008, EPA will revise the grant allocation methodology for the SIRG program and will implement the new methodology in FY 2009. The regional offices will still have discretion in determining the state or Tribal award amounts. EPA and SIRG recipients are expected to continue implementation of the SIRG measures template, checklist and guidance. SIRG workplans should reflect radon program priorities and measurable results.

A draft allocation for FY 2009 is shown in Table A-8. These levels are likely to change due to the FY 2009 appropriation amount and new allocation methodology. The SIRG program contact is Phil Jalbert (202-343-9431, jalbert.philip@epa.gov).

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- Mitigating existing homes
- Building homes to include radon resistant features (RRNC)
- Mitigating or building schools to include radon resistant features (RRNC)
- Other projects and activities that clearly contribute to achieving the three preceding goals, especially for homes.

Table A-8. FY 2009 Draft State Indoor Radon Grant Allocation (PRC - 102A05E)		
REGION	PERCENT	FY2009
1	10.2	$824K
2	8.9	$719K
3	10.30	$832K
4	16.9	$1365K
5	22.3	$1800K
6	6.0	$484K
7	8.8	$710K
8	7.2	$581K
9	6.8	$549K
10	2.6	$210K
TOTAL	100.0	$8,074,000